

FLIGHT

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

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EDITORIAL COMMENT.

ACCORDING to Mr. Samuel, M.P., who may be presumed to speak with inner knowledge of the intentions of those in authority, the Government has decided at last upon a policy of reprisals for the air raids which have hitherto been almost a German monopoly. We are unfeignedly glad to hear it, believing, as we do, that the real defence against raids lies in a properly organised and ruthlessly applied policy of offensive action. To our way of thinking, "reprisals" are the one form of action that is likely to impress on the enemy that it is hopeless for him to think he is going to win the war by terrorising the civilian population of these islands. Even if we were to do as the anti-reprisalists desire, and to take the German raids "lying down," we cannot conceive that the British people would allow themselves to be frightened into a frame of mind which would accept a German peace. They are of a different mental calibre to the Hun, and the thing that would drive the latter to the verge of frantic terror leaves them cold. But when we have said that, we have said all there is in favour of a purely defensive—or perhaps it would be more correct to say a passive defensive policy. We have

Reprisals at Last.

made the qualification advisedly, because we regard the carrying of the war into the enemy's own territory as being as truly defensive in character as the more passive arrangements for meeting the German air offensive that have subsisted hitherto.

Apart from the more defensive considerations which weigh in this matter of attacking Germany through the air, there are others which have put an entirely different complexion on the whole question of the aerial war. It is perfectly clear that the weight of Naval and Military opinion in America inclines strongly to the belief that the war is going to be lost and won in the air. Proceeding on that conviction, America is making huge preparations for the construction of an overwhelmingly strong air fleet, with the avowed purpose of taking the war straight into Germany. Americans are not going to be content to sit down to interminable trench war—they mean to take a shorter and more direct road to victory through the air. Now, it is inevitable that when America begins to give effect to those expressed intentions, it will involve a considerable destruction of German towns in the effort to accomplish military damage. Unfortunately, it will also involve the killing of German civilians, which, according to the German war code, is perfectly justifiable under all the circumstances. As we say, it is unfortunate that it should be so, and the fact, for fact it is, is extremely distasteful to the British sense of "playing the game." We have, however, arrived at a stage of the war when we have to look things squarely in the face. In the first place, are we to risk losing the war for what is, after all and under the circumstances, a matter of pure sentiment which has no weight in the councils of the enemy command. It is all very well to talk about coming out of the war with clean hands, but of what future use are to be "clean hands" if we emerge from it a defeated nation? Far better to achieve the worthy ends for which we are fighting at the expense of some sacrifice of high principles than that we should go down in their observance and be compelled henceforth to live in a world dominated by the Hun.

Another aspect of the question is this: Are we going to identify ourselves with the ideas and methods of our American Allies or not? Obviously, the answer is in the affirmative. That being clearly so, and being thus committed to carrying the aerial war into Germany, we shall shorten the conflict by beginning at once. Every day we delay means greater loss of life, greater outpouring of treasure,

and greater heartening of the enemy. So far as we are able to see, if the Government has indeed taken the decision—and there seems no reason to doubt it—the sooner we see effect given to it the better. Nothing is to be gained and much may be lost by delay.

Delays in the Output of Aircraft.

In a recent issue of the *Evening Standard* there appeared a scathing indictment of official methods, which, that journal alleges, are holding up the production of aeroplanes. It may be remembered that Lord Tenterden raised the question of delays in the delivery of essential machinery in the House of Lords, and arising out of this, the *Evening Standard* appears to have received a number of letters from prominent firms, giving concrete examples of these delays and their pernicious effect on the output of the aeroplanes which, the Government assures us, and we all agree, are necessary for the prosecution of the war.

One correspondent, the chairman of a controlled firm, says:—

"On March 14th we applied to the Area Clearing House (the authority which issues permits for the use of machinery) for certain additional plant. We paid for it at once. On April 24th an inspector came to make a report on our machinery, reported that we ought to have the plant applied for, and we filled in a four-page form in triplicate, but it was not until June 2nd that we got the plant.

"My firm manufactures small tools which are absolutely essential to the manufacture of aeroplanes and aeroplane engines. Without the aid of these tools the aeroplane factories are helpless, and delay in the manufacture of them means deadlock all round. One would imagine this at least was a case of urgency. Yet the facts are as I have stated. We have available space to treble the output of our factory, could we but get the machinery."

There are others, but the extract we have quoted is sufficiently indicative of the tenor of the correspondence. Things being as they are, for there is no room for questioning the *bona fides* of our contemporary's correspondents, the time has surely come for a close and thorough enquiry into the allegations made. The *Evening Standard* is a responsible paper. It has given chapter and verse for several cases of what appear to be criminal delay on the part of officials and departments, and we doubt not it can justify its statements. Therefore, it is clearly the business of someone high in authority to investigate those exceedingly clear statements and deal adequately with the people who are responsible for thus holding up industries which are vital to the successful carrying on of the war. Really, we are compelled to the feeling that things will not settle down into smooth running until a score or two of the obstructionists and inefficient have been hanged by the neck. Fortunate for them—and unfortunate it is for the country—that they have not to deal with a Napoleon or a Moltke. Their shrift would be short and we should get something approaching efficiency in our public services.

The consciousness that we have to
"One Air Service;
One Uniform;
One Badge."
come to the organisation our head-
ing connotes, and which "FLIGHT"
has consistently urged for the past
three years, seems to be sinking deeply into the
minds of our leading publicists, if we are to judge
by the amount of space devoted to the subject by
prominent journals. Among the recent notable

contributions to the subject, Lord Montagu's, in last Sunday's *Observer*, is one of the most valuable, in that it lays down the broad lines of a constructive policy. Mainly, Lord Montagu follows closely the opinions that have been set forth from time to time in our own pages. That is to say, he favours very strongly the idea of a service, separate and distinct from both Navy and Army, with its own Ministry and a Board analogous in constitution and functions to the existing Board of Admiralty. His idea of the constitution of the Board is as follows:—

President of the Board of Aviation—Cabinet Minister of first rank.

First Professional Assistant in charge of heavier-than-air service.

Second Professional Assistant in charge of lighter-than-air service.

Third Professional Assistant in charge of officer for supplies.

Fourth Professional Assistant in charge of operations and intelligence.

CIVIL ASSISTANTS.

DUTIES.

A Vice-President General assistance to President. Personnel, organisation and intelligence.

A Financial Secretary .. Finance supplies, and all questions relating thereto.

The President and his Board should be responsible for the Royal (or Imperial) Air Service in every sense. The air fleets, wings and squadrons would be directed by the Commander-in-Chief when working independently. When working in co-operation with the Navy and Army in the same way as at present orders for air operations would pass in future from the senior admiral or general through the senior naval or military Air Service representative of the new service on the spot.

In its broad lines the scheme is good. At least it forms a basis of discussion, and so far as the general principles are concerned there is very little fault to be found with it. There is, however, one very important point which Lord Montagu appears to have overlooked. It is notorious that the weakness of the present Admiralty constitution, which he has obviously taken as his model, is that it does not provide for a real War Staff for the formulation and direction of the strategical operations of war. Lord Montagu, by implication, relegates the all-important matter of the direction of operations generally to a relatively insignificant place in the scheme. He simply provides for a "Fourth Professional Assistant" in charge of operations, who would be, by the sequence of rank so to say, quite subsidiary to the heads of the departments of supply. It scarcely needs pointing out that the incidence should be reversed and that operations come first, it being for the War Staff to formulate its plan of operations while the business of the other branches is to keep *personnel* and supply up to the requirements of operations.

So far, this is a comparatively minor point, which could be easily got over by "changing rounds," and ranking the officer in charge of operations as "First Professional Assistant" and dropping the others a step in precedence. In the case of the Board of Admiralty, however, we have seen that what is required is not so much a First Sea Lord who is the adviser of his political chief on questions of strategy, as a properly constituted War Staff to think out and execute the strategical movements of war. The business is far too great, and the responsibility too heavy, for any one man to carry, and should be spread over a number. It may, it is true, be argued that the "Professional Assistant," whether first or fourth, in charge of operations, would be at liberty—and almost automatically would do so—to select officers known for their abilities as strategists to advise him

on the formulation and carrying out of operations. That is so, but the weak point of the arrangement is that the ultimate responsibility rests on the shoulders of the individual, who is thus tempted to reach his

own decisions against the weight of opinion of his subordinates. Therein lies the whole point of the argument for a properly constituted War Staff. In the one case, we have individual responsibility



"Adrift."

influenced or not, as the case may be, by the opinions of *subordinates*. In the other we have equal responsibility divided among a number of *colleagues*, whose decisions would be either unanimous or by majority. In this one respect we think Lord Montagu would do well to model his organisation on that of the General Staff of the War Office rather than on that of the Admiralty, which the lessons of the war have disclosed as being its weakest point.

The Need for an Overwhelming Air Fleet.

It is apparent—which is a matter for great thankfulness—that the need for an overwhelmingly superior aerial fleet is recognised at last, not only by the public, but by the Government itself. Indeed, the recognition goes rather deeper, since it now amounts to a conviction that it is in the air that we shall achieve history or sustain defeat. The Air Board has mapped out a great programme of aircraft construction, which will render us, even apart from the assistance of the United States, immeasurably superior to the enemy at the opening of the fighting season of 1918. There is only one reservation in connection with this ambitious programme of construction, which is well expressed by a writer in the *Daily Mail* who puts it thus:—

“If no troubles with labour interfere, if no shortage of material compromises our plans, 1918 should see the Allies dominating the German lines with their air fleets and bringing—in the only way possible—the ultimate victory.”

We do not believe in the possibility of a shortage of materials. We have all the resources of the world to draw upon, and even though we quite conceivably be unable to effect *all* we desire, we must not forget that any shortage to which we may be subjected will be as nothing to that felt by the Central Powers, cut off as they now are from any sources of supply but their own. Therefore, shortage in this connection is a purely relative term which has little bearing, all other things being equal, on the ultimate result. The only thing that may or can militate against our achieving the necessary margin of superiority that will ensure complete victory is trouble in the labour world.

We have no desire to discuss in advance the possible points of friction which are implied by the *Mail*, not only because no good end would be served by so doing, but because we cannot bring ourselves to believe that labour will, when it is faced with the facts of the situation, prove false to its trust. We acknowledge that labour questions have not been handled with conspicuous tact by the authorities of the Ministry of Munitions and that matters of minor

importance have been allowed to assume grave characteristics as a result, but on the whole labour has stood well by the country, and we are assured it will continue to do so if it is treated with common fairness allied to tact.

Mr. Churchill, as Minister of Munitions, has a unique opportunity of smoothing away the difficulties of a situation which certainly is possessed of some disquieting elements. If he can persuade labour that nothing but aerial superiority of an overwhelming nature can win the war for us, we have no doubt at all that labour will see that the necessary output of aeroplanes is achieved, so far as its own share of the business is concerned.

Mr. Churchill's New Post.

It was hardly to be expected that the appointment of Mr. Winston Churchill to succeed Dr. Addison as Minister of Munitions would pass without criticism. It is significant that most of the outcry it has caused has come from newspapers and politicians who were, in the days before the so-called party truce, politically opposed to him. To our way of thinking, it does not matter the proverbial row of pins whether Mr. Churchill sat on the Tory or the Radical side of the House. For all we care at the moment about his politics, he might be ultra-socialist or red republican. The only thing that matters is whether or not he is the best man available for the job. On his record, we believe he is, and we congratulate the Prime Minister on having had the courage to make what is certainly not an all-round popular appointment.

Mr. Churchill has, it is true, been associated with failures since the outbreak of war, but so far as they have been personal failures they have been those of action, which are much more easily forgiven than those of “wait and see.” In any case, we do not propose to argue whether Antwerp and the Dardanelles were to be laid at his door. It may be that the judgment of history will differ materially from that of contemporary opinion, but that may be allowed to pass for the moment. The main point as we see it now is that the new Minister of Munitions possesses breadth of outlook, imagination, and energy, which are the faculties most needed in the head of the greatest productive department of the Empire.

From the point of view of aircraft production alone we welcome the appointment, because we know that the new Minister is fully alive to the necessities of the times. For years he has taken an intimate interest in the development of aircraft, and our memory is not so short that we do not recollect it was due to him that the outbreak of war found the Navy with an Air Service in being.

Air Raid Warnings for London.

It was officially announced on July 21st that the experiments made on the previous Thursday with sky signals had showed the value of sound bombs for the purpose of warning the population of London. The Home Office has therefore arranged that when an air raid is believed to be imminent in the daytime these signals shall be sent up from all the fire brigade stations in the county of London, and this arrangement will be extended as speedily as possible to certain police stations in the populous area surrounding the Metropolis. The signal will consist of three sound bombs fired at intervals of a quarter of a minute. As each bomb leaves the small mortar from which it is fired there is a distinct report, and when it explodes in the air there is a loud report heard over a wide area. It is believed that this arrangement of signals

will be heard all over London. At the same time the “Take Cover” notices will be exhibited by police constables in the streets, and possibly after experience has been gained the signals may be supplemented in other ways.

The warning will not be given until, from the information received from the military authorities, it appears that an attack on London is intended; and having regard to the speed at which aeroplanes now travel the warning at the point first attacked can only be of a few minutes' duration. The public should, therefore, take cover immediately on hearing the signal. There is, of course, a possibility that a small number of enemy aircraft may approach London without being observed, in which case no warning could be given, but this risk is unavoidable.

When the message “All Clear” is received notice to that effect will be given by the police.

HONOURS.

Honours for the R.N.A.S.

It was announced in the *London Gazette* on July 20th that the following decorations and medals are given for services in action with enemy submarines:—

Distinguished Service Cross.

Flight-Lt. J. E. A. HOARE, R.N.A.S.

Flight Sub-Lt. W. L. ANDERSON, R.N.A.S.

Conspicuous Gallantry Medal.

C.P.O. Mech., 2nd Gr., J. F. TADMAN, O.N. 271984 (Ch.).—For conspicuous gallantry in climbing out on the wing of an aeroplane to plug a leak in the radiator. He remained in this position for a period of 20 minutes, thus enabling the aeroplane to return safely to her base.

Distinguished Service Medal.

F 13487 Air-Mech., 2nd Gr., D. R. CHAPMAN, O.N.

Mentioned in Despatches.

Sqdn.-Comdr. R. J. J. HOPE-VERE, R.N.A.S.

*For Miscellaneous Services.**Distinguished Service Cross.*

Lt. JOHN JENKINS, R.N.R.—For service in command of a seaplane-carrying vessel, on the East Indies and Egypt Station, during the period April 1st, 1916, to March 31st, 1917.

Lt. J. KERR, R.N.R.—For services in command of a seaplane-carrying vessel, on the East Indies and Egypt Station, during the period April 1st, 1916, to March 31st, 1917.

Sub-Lt. (Actg. Lt.) H. B. BELL-IRVING, R.N.V.R.—In recognition of his services in command of H.M. Drifter "I.F.S." in an engagement with five enemy seaplanes on June 11th, 1917. Two of the enemy machines were brought down by gunfire and destroyed.

Distinguished Service Order.

Wing-Capt. E. MAITLAND MAITLAND, R.N.A.S.—In recognition of valuable and gallant work in connection with airships and parachutes. He has carried out experiments at his own personal risk, and has made some descents under enemy fire.

Sqdn.-Comdr. C. H. BUTLER, D.S.C., R.N.A.S.—In recognition of his gallantry on June 5th, 1917, when he fought single-handed two engagements with a number of powerful hostile machines. He attacked six hostile aeroplanes together over the Thames Estuary, and later attacked two off Ostend. On each occasion the machine selected for attack was compelled to dive.

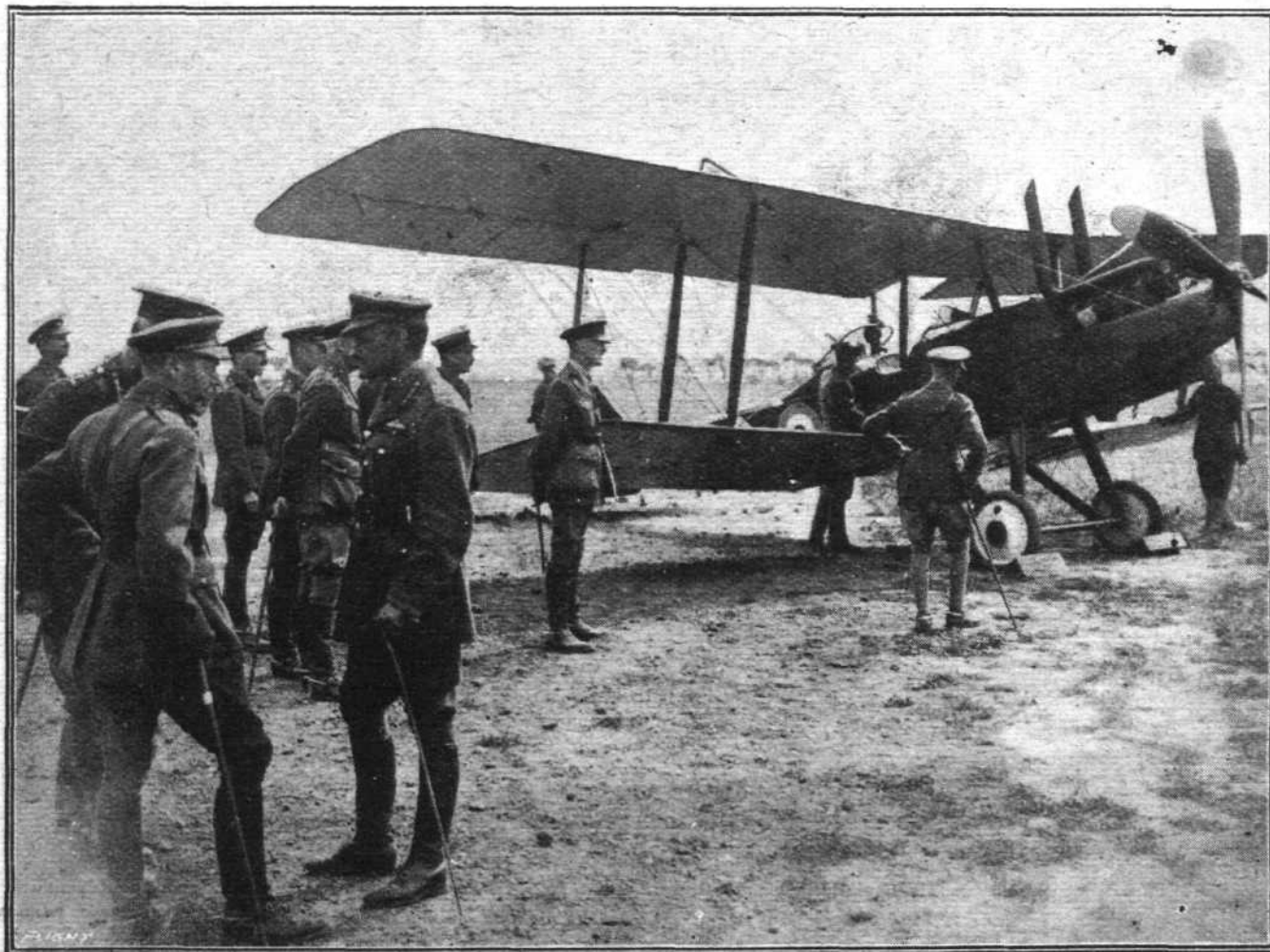
Flight-Lt. B. D. HOBBS, D.S.C., R.N.A.S.

Distinguished Service Cross.

Flight-Comdr. J. C. BROOKE, R.N.A.S.—In recognition of his services in the East Indies and Egypt Seaplane Squadron during the period April 1st, 1916, to March 31st, 1917. During this time he took part in several valuable reconnaissances and bombing flights, obtaining important information and doing considerable damage to enemy organisations.

Flight-Comdr. T. F. N. GERRARD, R.N.A.S.—In recognition of his services during an air fight on June 4th, 1917. This officer led his flight against fifteen to twenty hostile aeroplanes, and alone had ten engagements with these machines. He attacked one and fired 60 rounds into the cockpit at point-blank range, the enemy machine rolling over and over for 3,000 ft. and then falling vertically out of control. He then attacked another enemy machine which had dived on to one of our machines from behind, and with the help of a scout he shot it down, the enemy being seen to crash to the ground. Another hostile scout was then attacked by this pilot, end-on, and received a long burst at very close range, the enemy going down in a spin, but apparently righting himself lower down. During the last encounter Flight-Comdr. Gerrard's machine was riddled with bullets, but by fine piloting he landed safely, although all but his lateral controls were shot away and his machine damaged to such an extent as to require return to depot for complete rebuilding. This officer has now destroyed at least seven hostile aircraft. He was on active service in France and Belgium from April to September, 1916, and during that period performed much valuable work.

Flight-Comdr. R. F. S. LESLIE, R.N.A.S.—In recognition of his gallantry in pursuing hostile raiding aeroplanes out to sea in a land machine on May 25th, 1917. He attacked one



Official photograph issued by the Press Bureau.
THE ROYAL VISIT TO THE BRITISH WESTERN FRONT.—King George at an aerodrome.

hostile aeroplane, and caused it to descend in a steep nose-dive, emitting smoke and steam. He was unable to observe its fate, as he was himself immediately attacked from behind by two other hostile machines and temporarily lost control. When he regained control the machine which he had first attacked had disappeared, and two others were proceeding eastwards at a considerable height above him. He then returned safely to his aerodrome.

Flight-Lt. G. D. SMITH, R.N.A.S.—In recognition of his services in the East Indies and Egypt Seaplane Squadron during the period April 1st, 1916, to March 31st, 1917. During this time he took part in several valuable reconnaissances and bombing flights, obtaining important information and doing considerable damage to enemy organisations.

Flight-Lt. R. COLLISHAW, R.N.A.S.—In recognition of his services on various occasions, especially the following: On June 1st, 1917, this officer shot down an Albatros scout in flames. On June 3rd, 1917, he shot down an Albatros scout in flames. On June 5th, 1917, he shot down a two-seater Albatros in flames. On June 6th, 1917, he shot down two Albatros scouts in flames and killed the pilot in a third. He has displayed great gallantry and skill in all his combats.

Flight Sub-Lt. N. R. COOK, R.N.A.S.—For his services in an air raid on Zeebrugge Mole and hostile shipping on May 27th, 1917.

Flight Sub-Lt. R. F. L. DICKEY, R.N.A.S.

Warrant Officer, 2nd Gr., F. H. WHITMORE, R.N.A.S.—In recognition of his services in the East Indies and Egypt Seaplane Squadron during the period April 1st, 1916, to March 31st, 1917.

Distinguished Service Medal.

C.P.O. Mech., 3rd Gr., F. CUSDON, O.N.F. 5011; (Po.) 2nd Cl. Air-Mech. H. M. DAVIS, O.N.F. 20254; 1st Cl. Air-Mech. A. W. GOODY, O.N.F. 12237.

Mentioned in Dispatches.

Flight-Lt. E. J. P. BURLING, R.N.A.S., Flight-Lt. H. de V. LEIGH, R.N.A.S., Flight-Lt. F. M. FOX, R.N.A.S., Flight-Lt. H. V. WORRALL, R.N.A.S., Flight-Lt. T. G. M. STEPHENS, R.N.A.S., Flight-Lt. J. E. SCOTT, R.N.A.S., Flight Sub-Lt. R. H. DALY, R.N.A.S., Lt. W. C. A. MEADE, R.N.V.R.

Foreign Honours for the R.N.A.S.

THE following decorations have been conferred by the President of the French Republic for distinguished services rendered during the war:—

Croix de Guerre.

Flight-Comdr. J. D. NEWBERRY, R.N.A.S.
Flight-Comdr. F. FOWLER, D.S.C., R.N.A.S.
Flight-Comdr. C. C. R. EDWARDS, D.S.C., R.N.A.S.
Flight-Comdr. C. D. BOOKER, D.S.C., R.N.A.S.
Flight-Comdr. A. M. SHOOK, R.N.A.S.
Actg. Flight-Comdr. H. G. HOLDEN, R.N.A.S.
Flight-Lt. G. C. MACLENNAN, R.N.A.S.
Ob.-Lt. E. B. C. BETTS, R.N.A.S.
Flight-Lt. R. A. LITTLE, D.S.C., R.N.A.S.
Flight-Lt. J. E. SHARMAN, D.S.C., R.N.A.S.
Flight Sub-Lt. J. A. GLEN, R.N.A.S.
Flight Sub-Lt. W. E. FLETT, D.S.C., R.N.A.S.
Ob. Sub-Lt. C. K. CHASE, D.S.C., R.N.A.S.

The following has been conferred by the King of Italy:—

Order of the Crown of Italy.

Officer.

Wing Comdr. I. T. COURTNEY, R.N.A.S. (Capt. and Temp. Lt.-Col., R.M.L.I.).

The following has been conferred by the King of Belgium:—

Order of Leopold.

Officer.

Capt. C. L. LAMBE, D.S.O., R.N.

Chevalier.

Wing Comdr. S. D. A. GREY, D.S.O., R.N.; Sqdn. Comdr. E. T. NEWTON-CLARE, D.S.O., R.N.A.S.

Honours for the R.F.C.

In a supplement to the *London Gazette* issued on July 18th it was announced:—

The King has been pleased to award a second bar to the Distinguished Service Order to:—

Capt. CHARLES EDGAR BRYANT, D.S.O., Lrs. and R.F.C.—He has displayed the utmost gallantry and skill in leading photographic reconnaissances. In spite of overwhelming opposition by hostile aircraft, he has never failed to carry out his difficult task. (D.S.O. gazetted Feb. 18th, 1915.)

The King has been pleased to approve of the appointments of the following officers to be Companions of the Distinguished

Service Order in recognition of their gallantry and devotion to duty in the field:—

Lt. (Temp. Major) LEONARD WRIGHT LEARMOUNT, M.C., Gen. List and R.F.C., S.R.—He has shown great skill and determination when on photographic reconnaissances. Despite continuous fire from the ground and attack from hostile aircraft, he has repeatedly effected a safe landing after completing his task.

Temp. Lt. (Temp. Capt.) CHARLES-FREDERICK ALGERNON PORTAL, M.C., S.R., R.E. and R.F.C.—For many months he has done magnificent work in co-operation with the artillery. During an attack he succeeded in silencing nine active hostile batteries, ranging our artillery. His splendid example has been of the greatest value.

The King has been pleased to award a Bar to the Military Cross to the following officers:—

Temp. 2nd Lt. WILLIAM GEORGE BARKER, M.C., Gen. List and R.F.C.—He has done continuous good work in co-operation with the artillery, and has carried out successful reconnaissances under most difficult and dangerous conditions. (M.C. gazetted Jan. 10th, 1917.)

Capt. FRANCIS RICHARD CUBBON, M.C., Ind. A., attd. R.F.C.—When acting as an Observer on an offensive patrol, he displayed great skill and courage against superior numbers of the enemy. Throughout the action he backed up his pilot with a remarkable display of marksmanship. (M.C. gazetted in this *Gazette*.)

Lt. (Temp. Capt.) FREDERICK JAMES HARRY THAYRE, M.C., R.F.C., S.R.—When in command of an offensive patrol he showed fine leadership and skill, being personally responsible for bringing down three hostile machines. His coolness and courage enabled his small command to inflict severe losses on numerically superior forces. (M.C. gazetted in *London Gazette* of July 18th.)

The King has been pleased to confer the Military Cross on the following officers in recognition of their gallantry and devotion to duty in the field:—

Lt. JAMES DACRES BELGRAVE, Ofc. and Bucks L.I. and R.F.C.—On at least five occasions he successfully engaged and shot down hostile aeroplanes, and has consistently shown great courage and determination to get to the closest range; an invaluable example in a fighting squadron.

2nd Lt. MAURICE ARTHUR BENJAMIN, R.F.C., S.R.—He helped to attack two large hostile machines, one of which was seen to crash to the ground. Previously he helped to engage three hostile scouts, one of which was destroyed and the remainder dispersed. He has helped to destroy four hostile machines in all.

2nd Lt. EDWIN LESLIE BISHOP, Worc. R., S.R., attd. R.F.C.—When engaged with another pilot in taking important photographs, they were attacked by a superior number of hostile machines. The other pilot was forced to land, and he himself was driven down close to the ground, but, despite the presence of the hostile machines, he climbed once more and succeeded in taking a large number of most valuable photographs.

2nd Lt. CHARLES EDWARD BLAYNEY, R.F.C., S.R.—For conspicuous gallantry and skill on many occasions in successfully bombing stations and trains at very low altitudes. He has at all times displayed the greatest bravery and skill.

Capt. CYRIL MARCONI CROWE, R.F.C., S.R.—For conspicuous gallantry and skill as a leader of offensive patrols, many times attacking hostile formations single-handed, and descending to low altitudes under heavy anti-aircraft fire. He has been responsible for the destruction of several enemy machines.

Capt. FRANCIS RICHARD CUBBON, I.A., attd. R.F.C.—He has shown great pluck and determination when acting as observer, on several occasions displaying fine marksmanship and coolness against superior numbers of the enemy.

Temp. Capt. HAROLD FOWLER, Gen. List and R.F.C.—He has done invaluable service in co-operating with the artillery. On one occasion he descended to 300 ft. and turned our guns on to parties of hostile troops. During the advance he was able to furnish much valuable information.

Temp. 2nd Lt. CECIL STUART GOODFELLOW, Gen. List and R.F.C.—He has done valuable and consistent good work in co-operating with the artillery. He has carried out numerous patrol flights under most adverse weather conditions, and has set a splendid example to his squadron throughout.

Lt. (Temp. Capt.) LIONEL THOMAS NUTCOMBE GOULD, R.A. and R.F.C.—He has done consistent, good and valuable work while co-operating with the artillery, often under most difficult conditions. He has always set a splendid example by his exceptional pluck and determination.

Temp. 2nd Lt. (Temp. Capt.) JOHN BENJAMIN GRAHAM, Gen. List and R.F.C.—He has displayed great skill and

courage when leading photographic reconnaissances. On many occasions, although attacked by superior numbers, he, by his courage and determination, has succeeded in completing his reconnaissances.

Temp. 2nd Lt. (Temp. Capt.) ROBERT GREGORY, Conn. R., S.R., attd. R.F.C.—On many occasions he has, at various altitudes, attacked and destroyed or driven down hostile machines, and has invariably displayed the highest courage and skill.

Temp. 2nd Lt. WILLIAM HENRY GUNNER, Gen. List and R.F.C.—While on offensive patrol he engaged and attacked nine hostile aircraft, two of which were attacking the rear machine of his patrol. Having convoyed the other machine back to the aerodrome, he again returned with his patrol in response to an urgent call for aeroplanes to drive off hostile aircraft. He had been wounded in his previous encounter, but insisted on carrying on, and on numerous other occasions he has shown great skill and courage in offensive work.

2nd Lt. REGINALD THEODORE CARLOS HOIDGE, R.G.A., S.R. and R.F.C.—On many occasions he has attacked and destroyed or driven down hostile machines, and has taken part in 24 offensive patrols. In all combats his bravery and skill have been most marked.

Temp. Lt. RICHARD NEVILLE KENWARD JONES, Gen. List and R.F.C.—He has done consistent good work in the taking of photographs under very adverse weather conditions. By his perseverance and determination he has set a very high standard of efficiency in the photographic work of his squadron.

2nd Lt. ARTHUR GORDON JONES-WILLIAMS, Welsh R. and R.F.C.—He has continuously shown the utmost dash and gallantry in attacking superior numbers of hostile machines. On one occasion he attacked 12 hostile scouts, and succeeded in destroying one and driving down another.

2nd Lt. DOUGLAS STEWART KENNEDY, R.F.C., S.R.—While on a close patrol he attacked three hostile scouts and succeeded in dispersing them. A second formation of four enemy machines then attacked, but these were also dispersed, two of them being driven down. The result of these combats was largely due to his skill and determination.

Temp. 2nd Lt. REGINALD GEORGE MALCOLM, Gen. List and R.F.C.—He has shown exceptional skill and courage in aerial fighting. He has several times been attacked by superior numbers, and on each occasion has accounted for more than one of the hostile machines and effected a safe landing himself.

Temp. Capt. EYDE ROLLESTON MANNING, Gen. List and R.F.C.—For conspicuous gallantry and devotion to duty when conducting photographic reconnaissances. On one occasion he obtained successful photographs though attacked by eight hostile machines, and he has on all occasions displayed the utmost pluck and gallantry.

2nd Lt. (Temp. Capt.) KENNETH CAMPBELL MCCALLUM, Arg. and Sutthd. Highrs., S.R. and R.F.C.—When engaged in escorting a formation of bombing machines he attacked four hostile aircraft, bringing down two of them. While fighting these he was attacked by a large hostile formation, which completely surrounded him. Although badly wounded in the feet he succeeded in effecting a safe landing behind our own lines.

2nd Lt. LEWIS LANGHARNE MORGAN, Welsh R., attd. R.F.C.—He crossed the lines at a height of under 100 ft. and destroyed a hostile kite balloon. Previously he attacked a hostile scout at close range and brought it down in flames. He has shown great gallantry in many combats.

Lt. CHARLES ALLEN PARKER, R.F.A., Spec. Res., and R.F.C.—When on a photographic reconnaissance he was attacked by hostile scouts, and his observer was severely wounded. He effected a landing near our front line and carried his observer clear of the machine, which was heavily shelled the entire time and had burst into flames.

2nd Lt. (Temp. Capt.) LESLIE HURST PETER, R.E. and R.F.C.—When leading a reconnaissance his formation was attacked by hostile scouts. He kept his machines together and carried out a successful photographic reconnaissance despite a strong attack. To his leadership and initiative were largely due the success of the patrol.

Temp. 2nd Lt. WILLIAM THOMAS PRICE, R. War. R. and R.F.C.—His machine being disabled by hostile fire, and his gun out of action, he managed by skilful handling to effect a



Official photograph issued by the Press Bureau.
THE ROYAL VISIT TO THE BRITISH WESTERN FRONT.—Queen Mary interested in one of our aeroplanes.

safe landing, thus saving the machine and his passenger from capture. He has previously done fine work against hostile aircraft.

2nd Lt. ARTHUR PERCIVAL FOLEY RHYS-DAVIDS, R.F.C., S.R.—On many occasions he has shot down hostile machines and put others out of action, frequently pursuing to low altitudes. On all occasions his fearlessness and dash have been most marked.

Lt. (Temp. Capt.) EDWARD ARTHUR BECKTON RICE, R.F.C., S.R.—For conspicuous gallantry and devotion to duty when leading photographic reconnaissances. Though repeatedly attacked, he led the formation to its objective on every occasion with the utmost skill and determination, and has set a very fine example of leadership in no less than 11 successful operations.

2nd Lt. ALFRED SCOTT, R.F.A. and R.F.C.—For conspicuous gallantry and devotion to duty in personally laying a telephone wire under machine gun fire after his two telephonists had been wounded. He afterwards returned under heavy fire to the wounded men, got them under cover, and dressed their wounds.

Temp. 2nd Lt. (Temp. Capt.) JOHN KENNETH SUMMERS, Gen. List and R.F.C.—He has continuously performed valuable work in co-operating with the artillery. He has on many occasions flown at a very low altitude in order to give information to the infantry, which has proved of the utmost value.

Lt. (Temp. Capt.) FREDERICK JAMES HARRY THAYRE, R.F.C., S.R.—He has consistently displayed great dash and skill and determination when acting as a pilot in bombing raids. His fine offensive spirit and determination to close with the enemy has set a splendid example to his squadron.

Temp. Capt. ANTHONY HERBERT WILLIAM WALL, Middx. R. and R.F.C.—As an Observer he has on several occasions assisted to bring down hostile machines. His coolness and accurate shooting have helped very largely in aerial combats.

Temp. 2nd Lieut. EDMOND PERCY WILMOT, Gen. List and R.F.C.—For conspicuous gallantry and devotion to duty whilst co-operating with artillery. On one occasion he successfully ranged a siege battery on an enemy gun position in very bad weather, which necessitated flying at a very low altitude, during which he was subjected to an intense fire.

2nd Lt. (Temp. Capt.) WILFRED ASHTON McCLOUGHRY, Aust. L. Horse and R.F.C.—On many occasions he has displayed the highest courage and skill in successfully bombing stations and trains, often at very low altitudes, and has always given a fine example of energy and determination.

Capt. JOSEPH ACHILLE LE ROYER, Can. Inf. and R.F.C.—He has constantly shown great skill and courage when acting as observer. His accurate shooting and coolness under fire have largely contributed to his successful aerial combats against superior numbers.

His Majesty the King has been pleased to award the Military Medal for bravery in the field to the following N.C.Os. and men:—

- 12867 2nd Air-Mech. A. J. ACOCK, R.F.C.
- 6509 1st Air-Mech. G. A. BEARDMORE, R.F.C.
- 44350 2nd Air-Mech. F. C. KING, R.F.C.
- 50120 2nd Air-Mech. H. POTTER, R.F.C.
- 9563 Corpl. F. H. SQUIRE, R.F.C.
- 41453 Corpl. G. S. STOTT, R.A.M.C., attd. R.F.C.
- 5075 1st Air-Mech. J. D. WYNNE, R.F.C., attd. R.F.A.

"Mentioned in Despatches."

In the list of names brought to the notice of the Secretary of State for War by Lieut.-Gen. G. F. Milne, C.B., D.S.O.,

Commanding-in-Chief, British Salonica Force, for distinguished service rendered during the six months ending March 29th, the following appear:—

Royal Naval Air Service.

Lt. (Actg. Sqdn.-Comdr.) J. R. W. SMYTH-PIGOTT, D.S.O.

Royal Flying Corps.

Major (Temp. Lt.-Col.) G. W. P. DAWES, D.S.O., R. Berks R.; Lt. (Temp. Major) A. CLEGHORN, R.E.; Lt. (Temp. Capt.) C. W. WISE, A.S.C., S.R.; Lt. (Temp. Capt.) G. D. GARDNER, York. R.; 2nd Lt. (Temp. Capt.) W. L. BIRCH, W. York. R.; 2nd Lt. (Temp. Capt.) S. S. NEVILL, S.R.; Lt. W. S. SCOTT, M.C., Lan. Fus.; Temp. Lt. F. G. SAUNDERS, Gen. List; Temp. Lt. J. R. WILSON, R.E.; 2nd Lt. (Temp. Lt.) J. W. D. LEIGH, Cyc. Bn.; 2nd Lt. H. SCHOLTZ, R.F.A., S.R.; 2nd Lt. J. H. BROADWAY, Dorset R.; Temp. 2nd Lt. J. L. BAMFORD, Gen. List.

740 Flight-Sergt. R. J. C. TANSLEY (deceased), 2832 Sergt. A. ALCOCK, 2454 Corpl. T. M. YATES, 28309 1st Cl. Air-Mech. W. T. WOOD, 8073 1st Cl. Air-Mech. W. H. LEDGER, 3745 1st Cl. Air-Mech. W. E. PARKHURST, 2372 1st Cl. Air-Mech. W. WOLFE.

In a list of names to be added to those brought to the notice of the Secretary of State for War for distinguished and gallant services and devotion to duty in the despatch of the Field-Marshal Commanding-in-Chief the British Armies in France, the following appears:—

2nd Lt. E. C. PASHLEY, R.F.C., S.R. (killed).

Some Other Interesting Awards.

In the list of honours recently announced are included the following, which although not directly concerned with flying, are interesting as having been awarded for work in connection with aircraft:—

Bar to Military Cross.

Temp. Lt. (Actg. Capt.) C. H. A. HUXTABLE, M.C., R.F.A.—For conspicuous gallantry and devotion to duty in rescuing the wounded pilot of one of our aeroplanes. The enemy had ranged upon the fallen aeroplane, and without any hesitation this officer plunged into the most intense and accurate shell fire, and with the aid of a signaller brought the pilot into safety. (M.C. gazetted March 30th, 1916.)

Temp. Capt. H. G. JANION, M.C., R.A.M.C., attd. R.H.A.—He was assisting to remove the pilot from a wrecked aeroplane when the spot came under heavy fire from a hostile battery. Several of the bearers were wounded, but by his courage and example this officer collected fresh bearers and conveyed the wounded man to safety. This task was carried out under continuous shell fire. (M.C. gazetted June 23rd, 1915.)

Military Cross.

2nd Lt. S. M. Gow, R.G.A., Spec. Res.—For conspicuous gallantry and devotion to duty in handling his section of anti-aircraft guns which were being heavily shelled by the enemy. His coolness and disregard for his own safety undoubtedly saved many casualties, at the same time affording a splendid example to his men.

Capt. (now Temp. Maj.) R. H. MACDONALD, Can. A.M. Corps.—One of our aeroplanes was shot down, the observer was wounded and pinned beneath the wreck. This officer and a bearer went out in full view of the enemy, who were shelling the machine, and extricated the wounded man and removed him to safety. He himself was severely wounded while doing so.



With the Queen at the Front.

Writing to the *Daily Telegraph* on July 17th relative to the Queen's visit to the Front, Mr. Philip Gibbs said:—

"After a visit to an aircraft repair shop there was a little drama in an aerodrome. The first character to appear was a pilot, who flew concealed in a mass of vaporous cloud until the time for his entry, when suddenly he dropped out of the cloud above the Queen's head in an appalling nose-dive which was so much like a real fall that the Queen and others standing by her gave exclamations of alarm, until with a laugh of relief they saw that it was premeditated, and that the pilot, as he stooped low and flattened out, had perfect command of his machine.

"He was followed by two other flying men, who streaked across the sky at a prodigious speed, and after manœuvring overhead for some time came to earth so that their wheels skirted the grass as lightly as the pirouette of a dancer in muslin. They were brought to the Queen in their helmets and leather coats—knights of the air and true sons in type

and breed of those young knights-errant who rode under Sir Walter Manny and the Lord of Chandos in these same fields of France more than half a thousand years ago.

"The Queen asked them how they felt when they were nose-diving, and they found it hard to explain. She gave them her gloved hand, and after taking it they were quick to the salute."

The Export of Aeroplane Designs.

A ROYAL Proclamation has just been made prohibiting the export of "drawings, designs, specifications and other descriptions in writing of any kind of aeroplanes or other aircraft, or of engines, or other accessories of aircraft" without a licence from the Air Board.

A Zeppelin and Aeroplanes Over Holland.

On the morning of July 19th Dutch neutrality was again violated by a Zeppelin, which passed over Groningen, going eastward. Dutch soldiers fired at it.

On the evening of July 16th 10 German aeroplanes passed the island of Ameland, going west.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

SPECIAL COMMITTEE MEETING.

A SPECIAL MEETING of The Committee was held on Monday, the 23rd inst., when there were present:—Col. Sir Capel Holden, K.C.B., F.R.S., in the Chair, Lieut.-Col. W. D. Beatty, R.E., Mr. J. H. Nicholson, Wing-Commander Alec Ogilvie, R.N., Lieut.-Com. H. E. Perrin, R.N.V.R. (in attendance), and the Assistant Secretary.

Election of Members.—The following New Members were elected:—

Lieut. Lothair William Gebhard Blucher (Middlesex Regt.)
William Pancoast Clyde, Junr.
Lieut. John Percy Cuninghame (151st Bn. C.E.F.).
Reginald Foster Dagnall.
Charles Edgar Fellowes.
Squadron-Commander Francis Knox Haskins, R.N.
Flight Lieut. Humphrey Tudor Jones, R.N.
Gerald St. Gour Kelton.
Wing-Capt. Charles Laverock Lambe, R.N.
John Lankester Parker.
Flight Lieut. Ronald Francis Redpath, R.N.
Lieut. Alan Williams, R.N.V.R.

Presentation to Club.

Colonel and Mrs. Beevor have very kindly presented to the Club a Clock, in memory of their son, Lieut. C. F. Beevor.

Club House.

The following prices have been fixed for the present by the Committee:—

Bedroom (including Bath)	.. 5s. each per night.
Breakfast 2s. 6d.
House Luncheon 2s. 6d.
House Dinner 3s. 6d.

Billiard Room.

The Billiard Room is now open for the use of the Members.

THE FLYING SERVICES FUND administered by

THE ROYAL AERO CLUB.

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 3, Clifford Street, New Bond Street, London, W. 1.

Subscriptions.

	£	s.	d.
Total subscriptions received to July 17th, 1917	11,857	5	7
Employés of Ruston, Proctor and Co., Ltd.,			
Aircraft Works (Twentieth contribution) ..		1	0

Total, July 24th, 1917.. .. 11,858 5 7

B. STEVENSON, Assistant Secretary.

3, Clifford Street, New Bond Street, W. 1.

THE CAPTURE OF BAGHDAD.

ALTHOUGH only short references are made in a long despatch from Lieut.-Gen. Sir Stanley Maude, commanding the Mesopotamian Expeditionary Force, describing the operations which culminated in the capture of Baghdad, &c., that little is very emphatic in praise of the value of aircraft to the Expedition. In connection with the capture of Kut, Gen. Maude says that during this period the splendid qualities of the infantry were well seconded by the bold support rendered by the artillery and by the ceaseless work carried out by the R.F.C. After the capture of Baghdad, "the enemy's flight was now so rapid that touch was not obtained again, and on March 16th our aeroplanes reported stragglers over a depth of 20 miles, the nearest being 25 miles north of Mushaidie."

The despatch, dated April 10th, 1917, was published as a supplement to the *London Gazette* on July 10th, and the detailed references to aircraft work are as follows:—

"During the night of the 14th-15th (December, 1916) our aeroplanes, flying by moonlight, bombed the Turkish bridge over the Tigris east of the Shumran Peninsula, which the enemy was endeavouring to move further upstream, and the pontoons, breaking adrift, were scattered."

Referring to the operations against the Hai Salient, from January 20th to February 5th, 1917, Gen. Maude says:—

"During this period the splendid fighting qualities of the infantry were well seconded by the bold support rendered by the artillery, and by the ceaseless work carried out by the R.F.C."

"Weather conditions (from February 6th-11th) rendered aerial reconnaissance impracticable."

"That such good results (the ejection of the Turks from the Dahra Bend) were achieved was due to the heroism and determination of the infantry, and to the close and ever-present support rendered by the artillery, whose accurate fire was assisted by efficient aeroplane observation."

"The cavalry attempted to break through at the northern end of the Shumran Bend, to operate against the enemy's rear along the Baghdad road, by which aeroplanes reported hostile columns to be retreating. . . . On March 8th a bridge was constructed across the Tigris, half a mile below Bawi, and the cavalry, followed by a portion of Lieut.-Gen. Cobbe's force, crossed to the right bank in order to drive

the enemy from positions which our aeroplanes reported that he had occupied about Shawa Khan, and north-west of that place, covering Baghdad from the south and south-west. . . . During the forenoon of March 9th Shawa Khan was occupied without much opposition, and aeroplanes reported another position $1\frac{1}{2}$ miles to the north-west, and some 6 miles south of Baghdad, as strongly held. . . . The enemy's flight was now so rapid that touch was not obtained again, and on March 16th our aeroplanes reported stragglers over a depth of 20 miles, the nearest being 25 miles north of Mushaidie."

In his general summary of the work of the Kite Balloon Section, R.N.A.S., Gen. Maude says:—

"To the Royal Navy the thanks of the Army are due for the thorough way in which they carried out somewhat restricted, but none the less important, duties during the earlier part of this period. The fact that the enemy barred the way at Sannaiyat necessitated their work being at first limited to assisting in the protection of our water communications, co-operating with our detachment on the Euphrates front and occasionally shelling the enemy's position at Sannaiyat, where the Naval Kite Balloon Section rendered good service in observation work."

"The intense but methodical fire of our guns formed a screen of shells under which our infantry advanced boldly, whilst the accuracy of our gun fire was largely assisted by the excellent observation work done by the R.F.C. The activity of the latter throughout the operations was unbounded in co-operation with artillery, air combats, reconnaissance, raiding, bombing and photography. The R.F.C. at the outset wrested the command of the air from the enemy, and subsequently by skill and ceaseless energy maintained its superiority, in spite of the heavy strain thrown on personnel and machines."

□ □ □ □

Propaganda by Aeroplanes.

A MESSAGE from Petrograd says that soldiers in the trenches, on July 16th, prior to the Petrograd rioting, received bulletins from German aeroplanes saying:—

"Members of the Russian Provisional Government have been arrested. There has been rioting in the city. No use your fighting."

THE ROLL OF HONOUR.

REPORTED by the Admiralty:—

Killed.

Flight Sub-Lieut. R. G. Begg, R.N.
Obs. Sub-Lieut. E. A. Planterose, R.N.
Wing Comdr. C. M. Waterlow, R.N.
F 10045 P.O. Mech. W. L. Mitchell, R.N.A.S.

Accidentally Killed.

Flight Sub-Lieut. F. M. Bryans, R.N.
Flight Sub-Lieut. D. H. Daly, R.N.
Prob. Flight Off. T. A. Warne-Browne, R.N.

Died of Wounds.

K 10970 Ldg. Mech. W. J. Edwards, R.N.A.S.

Previously Missing, now reported Killed.

Flight Comdr. C. R. Mackenzie, D.S.O., R.N.

Wounded.

Flight Sub-Lieut. L. A. Philip, R.N.

Slightly Wounded.

Flight Sub-Lieut. L. N. Glaisby, R.N.

Missing.

Flight Sub-Lieut. F. W. Akers, R.N.
Flight Sub-Lieut. F. Bray, R.N.
Flight Sub-Lieut. R. L. Kent, R.N.
Actg. Flight-Comdr. G. G. MacLennan, R.N.

Reported by the War Office:—

Killed.

Lieut. B. W. Binkley, Sas., attd. R.F.C.
2nd Lieut. F. E. Bishop, R.F.C.
Capt. W. Campbell, R.F.A., attd. R.F.C.
2nd Lieut. E. Churcher, Rif. Brig., attd. R.F.C.
2nd Lieut. A. A. Creasy, Bedford, attd. R.F.C.
Capt. D. C. Cunnell, Hamps. and R.F.C.
2nd Lieut. G. S. Ellis, R.F.C.
2nd Lieut. G. W. Foreman, R.F.C.
2nd Lieut. H. E. MacFarlane, R.F.C.
Capt. R. B. Orr, A. and S.H. and R.F.C.
Capt. H. P. Osborne, New Bruns., attd. R.F.C.
2nd Lieut. M. H. Thunder, R.F.C.
2012 Flight-Sergt. F. G. Matthews, R.F.C.

Previously reported Accidentally Killed, now reported Killed.

Lieut. L. A. Wheatley, Sas., attd. R.F.C.

Accidentally Killed.

Lieut. J. C. Hanson, New Bruns., attd. R.F.C.

Previously Missing, now reported Killed.

2nd Lieut. R. S. Bennie, R.F.C.
2nd Lieut. F. H. Foster, R.F.C.
2nd Lieut. E. D. Haller, R.F.C.
Capt. L. W. McArthur, M.C., H.A.C. and R.F.C.
2nd Lieut. W. G. Milliship, R.F.C.
2nd Lieut. H. F. Paton, R.F.C.
2nd Lieut. E. T. Philip, R.F.A., attd. R.F.C.
2nd Lieut. A. G. Robertson, Black W., attd. R.F.C.
Capt. F. J. H. Thayer, M.C., R.F.C.

Died.

44754 2nd Air-Mech. C. J. Hutchison, R.F.C.
1046 A. W. C. Wakely, Aus. F.C.

Died of Wounds.

Lieut. F. G. Pearson, R.F.C.
7913 2nd Class Air-Mech. C. Brown, R.F.C.
6657 1st Class Air-Mech. V. Bundock, R.F.C.
49099 Sergt. P. Rudd, R.F.C.

Previously Missing, now reported Died of Wounds.

Lieut. W. P. Garnett, R. Berks, attd. R.F.C.

Wounded.

2nd Lieut. C. R. Alston, R.F.C.
2nd Lieut. W. Birch, R.F.C.
Capt. E. W. Broadberry, Essex and R.F.C.
2nd Lieut. D. S. Buchanan, I.A., R.O., attd. R.F.C.
2nd Lieut. A. K. A. M. Buschmann, Mddlsx., attd. R.F.C.

Lieut. W. M. E. Chester, Cent. Ont., attd. R.F.C.
2nd Lieut. F. P. M. Court, R.F.C.
2nd Lieut. J. Cross, R.W. Kent, attd. R.F.C.
2nd Lieut. M. Dudbridge, R.F.C.
Capt. K. L. Gopsill, E. Surr., attd. R.F.C.
Capt. R. C. L. Holme, M.C., Som. L.I., attd. R.F.C.
2nd Lieut. B. C. Jones, R.F.C.
2nd Lieut. D. Logan, A. and S. Hrs., attd. R.F.C.
2nd Lieut. W. MacLanachan, R.F.C.
2nd Lieut. R. E. Money-Kyrle, R.F.C.
Lieut. V. W. Nutkins, R. Scots F. and R.F.C.
2nd Lieut. L. W. Osman, R.F.C.
Capt. J. Palethorpe, M.C., R.F.C.
Capt. H. S. Powell, M.C., R.F.C.
Capt. J. A. Le Royer, Queb., attd. R.F.C.
2nd Lieut. F. H. St. C. Sargant, R.F.C.
Major A. J. L. Scott, M.C., Yeo. and R.F.C.
2nd Lieut. J. S. Turnbull, Worc., attd. R.F.C.
Lieut. S. Willmott, R.F.A., attd. R.F.C.

Previously Missing, now reported Wounded and Prisoner in German hands.

Capt. T. M. Dickinson, Cav., attd. R.F.C.

Missing.

Lieut. P. W. Battersby, Yeo. and R.F.C.
2nd Lieut. M. O. Baumann, R.F.C.
Capt. E. A. Brooks, Wilts., attd. R.F.C.
Lieut. J. Crafter, M.C., Lond. and R.F.C.
2nd Lieut. K. G. Cruikshank, R.F.C.
2nd Lieut. C. M. De Rochie, R.F.C.
2nd Lieut. J. W. Fleming, R.F.C.
Lieut. J. B. Fotheringham, Queb., attd. R.F.C.
2nd Lieut. J. C. Griffith, R.F.C.
Capt. F. N. Hudson, M.C., Bufts., attd. R.F.C.
2nd Lieut. H. M. Lewis, Welsh, attd. R.F.C.
Lieut. J. C. MacGown, Yeo. and R.F.C.
Lieut. A. P. Matheson, R.F.C.
Lieut. C. G. Mathew, R.F.C.
Lieut. A. W. B. Miller, Scot. Bord., attd. R.F.C.
Lieut. V. A. Norvill, Aust. F.C.
Capt. J. E. A. O'Dwyer, Sher. For., attd. R.F.C.
2nd Lieut. F. L. Oliver, Som. L.I., attd. R.F.C.
2nd Lieut. G. H. Palmer, R.F.C.
Capt. C. E. Robertson, R.F.C.
2nd Lieut. A. J. Savoury, Yeo. and R.F.C.
Lieut. E. D. Slitter, Can. Rlwy. Trps., attd. R.F.C.
2nd Lieut. T. E. Smith, R.F.C.
Lieut. F. C. H. Snyder, W. Ont., attd. R.F.C.
2nd Lieut. W. A. Strickland, Mddlx., attd. R.F.C.
2nd Lieut. R. Trattles, R.F.C.
2nd Lieut. H. H. Whytehead, R.F.C.
Lieut. F. W. Winterbotham, Yeo. and R.F.C.

Prisoner in German hands.

Lieut. A. C. Lee, R.F.C.

Previously Missing, now reported Prisoners in German hands.

2nd Lieut. A. E. Crisp, Norfolk and R.F.C.
2nd Lieut. W. Gilchrist, R.E., attd. R.F.C.
Lieut. E. J. Grout, R.F.C.
2nd Lieut. L. Holman, Hrs., attd. R.F.C.
Lieut. G. D. Hunter, Cent. Ont., attd. R.F.C.
2nd Lieut. W. J. Mussared, R.F.C.
Lieut. C. R. O'Brien, R. Lanc., attd. R.F.C.
2nd Lieut. C. C. F. Osborn, R.F.C.
2nd Lieut. F. Sharpe, Sher. For., attd. R.F.C.
2nd Lieut. F. D. Slee, R.F.C.
2nd Lieut. G. C. Stead, R.F.C.

Corrections:

Reported Missing.

Lieut. G. M. Goods, R.F.C., should read Lieut. G. M. Goode, R.F.C.

Previously reported Missing, now reported Prisoner in German hands.

2nd Lieut. F. Sharpe, Sher. For., attd. R.F.C., should read Lieut. F. Sharpe, Sher. For., attd. R.F.C.

A Rumour Denied.

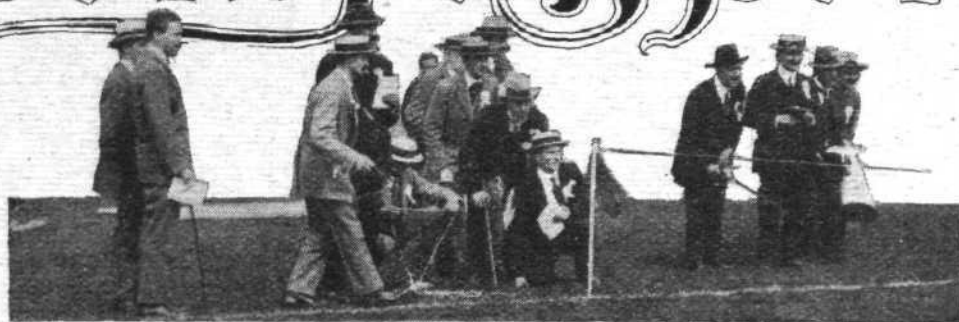
In reply to a telegram despatched from a Tower Hill meeting to the King asking if His Majesty would consent to receive a deputation with regard to air raids, and to deny the rumours as to the alleged withdrawal of aeroplanes from London, the following telegram was received by Mr. Harry Biner, organiser of the People's Fairplay League:—

"Buckingham Palace, July 18th, 1917.

"In reply to your telegram of to-day I have to inform you that it is contrary to usage for the King to receive any deputation except on the advice of His Majesty's responsible Ministers. There is no truth whatever that any aeroplanes were withdrawn from London to give a display before His Majesty, or for any object connected with the King's visit to France."

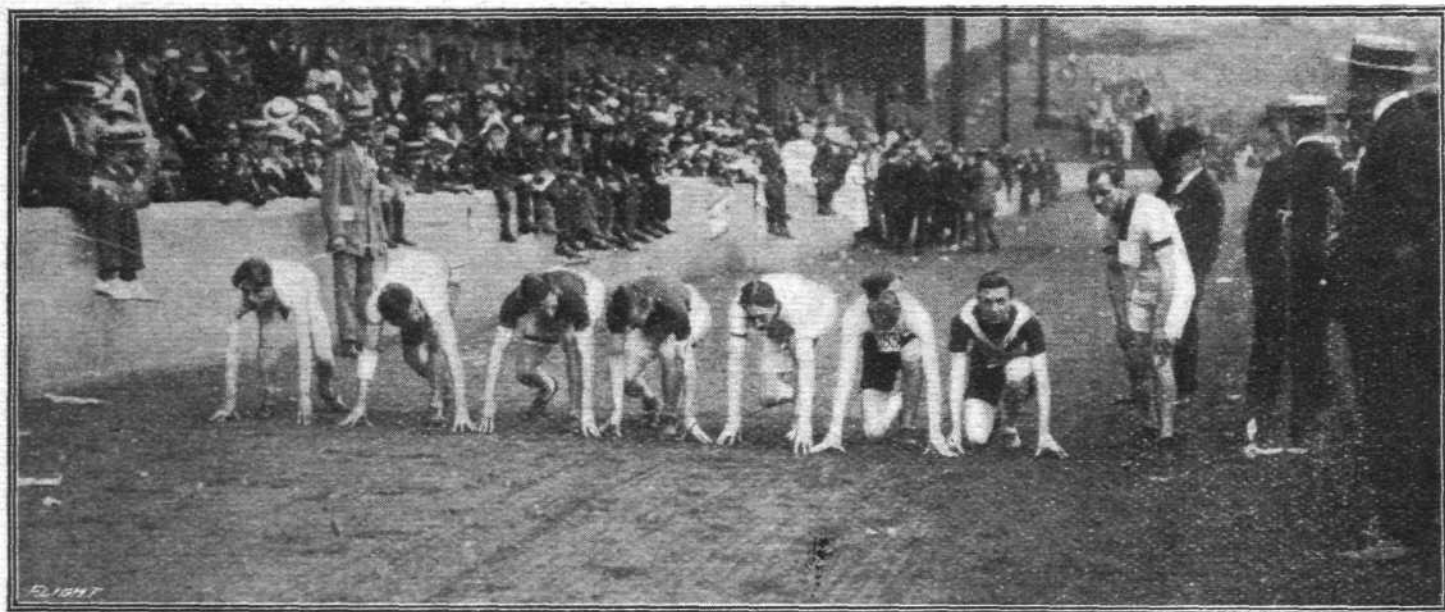
"STAMFORDHAM."

Aircraft Sports.



IN aid of the Y.M.C.A. Fund for Disabled Soldiers' and Sailors' Hostels and Trade Colonies—a most deserving cause—the second annual sports of the Aircraft workers took place on Saturday last at

a deluge of rain from start to finish, much to the discomfort of all concerned, but in no way checking or even damping the enthusiasm of the aircraft sportive sons and daughters of Britain. Saturday's meeting



THE AIRCRAFT SPORTS.—Start for the 440 Yards Race, for Whitehead Challenge Trophy and a "FLIGHT" prize. Won by Mr. Howell (Darracq), the second competitor from the right.

"Flight" Copyright.

Stamford Bridge Grounds. It will be remembered that last year the event was held at Hendon, when the weather was in such ill-accord that it assembled its rain clouds in massed formation and poured down

was held under very different conditions, for, as though to atone for last year's bad grace, the sun poured down in one continual blaze from start to finish.



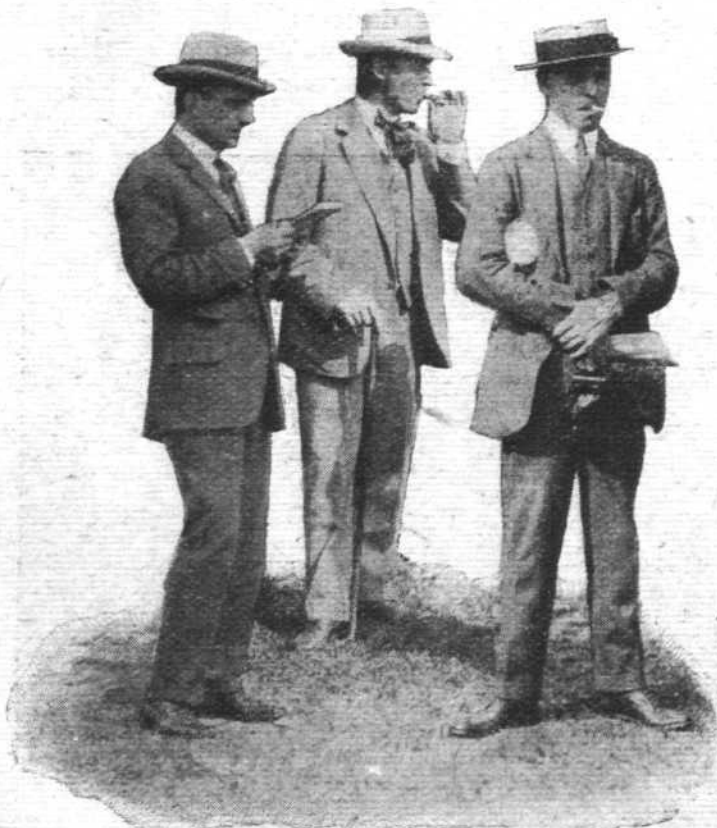
THE AIRCRAFT SPORTS.—Ladies' 60 Yards Race. Miss White (Darracq), No. 11, winning the "Cellon" Challenge Bowl and "FLIGHT" prize given for this event.

"Flight" Copyright.

From the first competition to the last nothing occurred in the slightest way to mar a perfect afternoon's sport, the events being staged and performed with a clock-like regularity from 3 o'clock until well on towards 9.

Illustrative of the times in which we live and the cares thereof, a little diversion came about midway in the programme. Distant and muffled boomings began to make themselves audible, apparently increasing in number and nearness. Eyes began to search the sky, and whispers of "Air raid" passed from lip to ear. Concurrently the megaphone man ordered all those many people sitting on the wall in front of the grand stand with their legs dangling over the track to withdraw these useful appendages to the inner side. At that moment the band struck up the National Anthem. That settled it. We all felt very brave and very loyal, and we all had a queer kind of little fluttering where our lunch ought to have been. In fact, there was just a momentary "nervy" wave. But the sports proceeded, and the spring doors at the back of the stand—that had been released to accommodate the tea-takers—continued to furnish what we had thought was the boom of guns, and by the time H.H. Princess Helena Victoria—upon whose arrival the band had struck up—had taken her seat in the allotted place, it was realised that one more imaginary air raid had fizzled out.

The Ladies' 60 yards' flat race was a popular event and attracted a huge crowd of entries, the competitors having to be arranged in 13 heats of 12 runners. Miss White, of Darracq's, who has even improved on her running of last year, when she won three prizes, was again successful, winning a magnificently fought out race by a short head and thereby securing the Challenge Bowl and the "FLIGHT" prize. If all of those girls are as fast—or, rather, work as fast—as they run, the output of aircraft should rapidly increase, as politicians keep telling us it will. Curiously enough another member of the Darracq house, Mr. Howell, won the 440 yards flat race and carried home the other "FLIGHT" prize.



"H.P." "Whitecraft." "A.S.C."
AT THE AIRCRAFT SPORTS.

The high jump took place in a remote corner of the arena, and the two cycle events were arranged to finish on the far side of the track. The why and the wherefore of this was not readily apparent, especially with a track exactly four laps to the mile. Next year, perhaps, it will be arranged to finish before the grand stand. Certain it is that finishing on the far side, with the host of officials and others lining the track near the finishing line, nothing could be seen of the riders after passing behind the crowd 100 yards from the finish, until they emerged 50 yards on the other side. Still, we're not kicking. It was but an incident that was, no doubt, noticed and made a note of in the proper quarter.

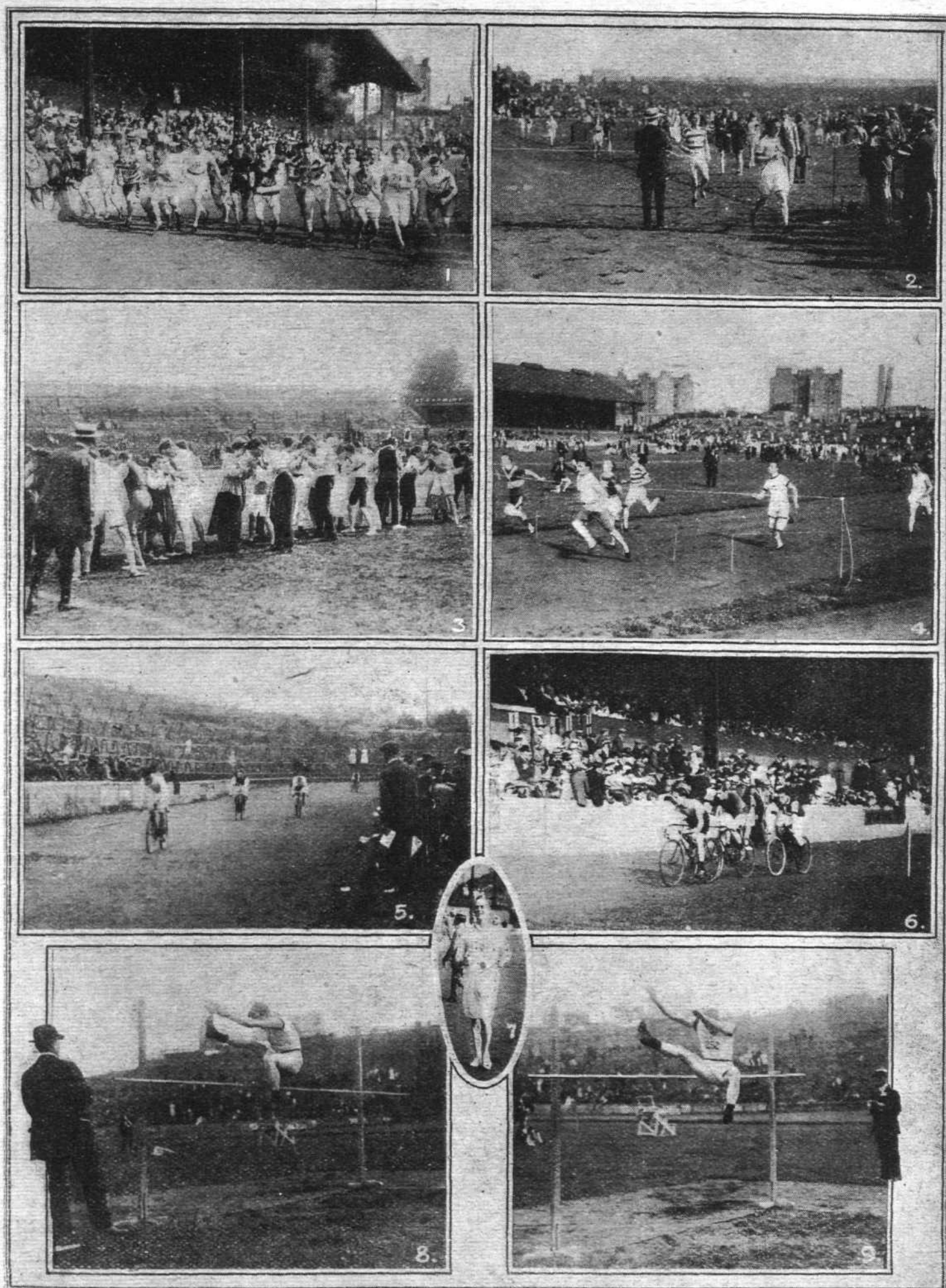
The Cigarette race caused endless amusement, especially the way the male competitors grabbed their fair partners by one hand and hauled them along on the return journey, like paterfamilis catching a train with "Li'l Em'ly streaming away behind." The moral attached to this event seemed to depend greatly upon the quality of the matches used, and we all know what war-time matches are like.

The great feature of the two-mile walk, apart from the fine form displayed by the winner, who went right away from the start at a pace nobody but himself believed he could hold, was the "stunt" put up by Mr. No. 178. This sportsman left the mark, shoulders braced, elbows to side, and chin high, in orthodox fashion, at a brisk four miles an hour, and a smile that was seraphic, childlike and bland. Nothing could non-plus him. The cheers of the crowd each time he passed the stand only broadened his smile, and continuing the while other events were in progress, he finished the course some time later in the afternoon to a round of applause.

The boat race was something new to many, being a sport of soldiers, imported by the Y.M.C.A. A pole is requisitioned and borne by the "crew," who proceed backwards in boating fashion, the "cox" only travelling forward and steering the craft. "Bow" is evidently an unthankful number in these boats—for he generally, according to observation, gets run off his feet, and falling backwards gets a stirring poke in the midriff by the end of the pole propelled by the other five stalwart "oarsmen." At the turn for "home" also there is trouble of sorts, owing to the boats taking "one another's water," and through faulty steering administering many biffs amidships. One poor "bow" went clean over his opponent's "boat" into the "water" beyond, followed by a couple of yards of "boat." Nobody was drowned.

In the Inter-Works Championship, Napier, holders for 1916, were again successful, winning with 19 points. There was a dead heat for second honours between Handley Page and Darracq, each with 10 points. Also in the relay race came a dead heat between Sopwiths and Gwynnes, illustrative of the quality of the racing and the form and training of the competitors.

The Obstacle race caused endless amusement as usual, especially at the water jump, which appeared to be a surprise trap to the runners, judging by the way the first round took it—or didn't. All in this heat fell in together, and took the water so literally that the attendant had to turn on the hosepipe and replenish before the next round. But the balloon had been pricked, the next round took things very carefully, dropping gently over the hedge, feet together, so avoiding getting tripped up by what might be called "tanglefoot," and getting wet only to the knees.



"Flight" Copyright.

AIRCRAFT WORKERS' SPORTS.—1. Start for the 880 Yards Flat Race. 2. Mr. Welsh (Napier), winning the 880 Yards Flat Race. 3. The Cigarette Race; the ladies lighting the gentlemen's cigarettes—many a good man lost the race through a bad match. 4. Mr. Hicks (Handley Page) winning the 100 Yards Sprint. 5. Finish of the Three Miles Cycle Race. 6. Well bunched in the last lap of the second heat of the Three Miles Cycle Race. 7. Mr. P. Lomas, of Hoopers, pursuing his leisurely way in the Two Miles Walk. 8. Well over in the final of the High Jump. 9. Mr. R. E. Smith (Napier) winning the High Jump at 5 ft. 2 ins.

Men do undoubtedly rejoice in their muscular strength, therefore the tug-of-war is always a popular feature and tussle. Stalwart arms lugged and pulled and heaved under a sweltering sun for the greater part of the afternoon. They had a corner of the ground all to themselves from which proceeded hoarse shouts of "Heave, heave," literally for hours on end. Poor struggling, heaving, enthusiastic men, a sweltering afternoon—and Government "beer" at 10d. a pint.

But it all went to make up a joyous and happy day, and as the evening shadows were gathering the Princess

distributed the prizes, closing down a long and most successful afternoon's sport just in time for those hard working men mentioned above—and others—to reach "houses of rest" before the war time and summer time combined to defeat their purpose.

The complete list of the results, as officially compiled, is as follows:—

RESULTS.

100 Yards Flat (Boys).—1. A. Claxton (Napier), 11½ secs.; 2. G. Parsons (Napier); 3. A. Williams (Grahame-White).
60 Yards (Ladies).—1. Miss F. White (Darracq); 2. Miss G. Phelan (Gwynne's, Ltd.); 3. Miss A. Peckham (Aircraft Manufacturing Co.).



"Flight" Copyright.

AIRCRAFT WORKERS' SPORTS.—1. The "Boat" Race. 2. Princess Helena Victoria about to present the prizes. 3. Aircraft girls getting "sacked." 4. Start of Ladies' Sack Race. 5. Pillow Fight. 6. J. Theobald (Gwynnes) winning the Two-Mile Walk.

High Jump.—1. R. E. Smith (Napier), 5 ft. 2 ins.; 2. E. Dixon (Hooper's); 3. M. Anderson (Darracq).

Half Mile Boys' Relay Race.—1. Napier; 2. Whitehead; 3. Darracq.

220 Yards Flat.—1. J. Howell (Darracq); 2. W. Clennell (Napier); 3. J. Thomson (Napier).

Cigarette Race.—1. Miss Baker, Mr. Jimpson; 2. Miss Stone, Mr. Mead; 3. Miss Freeman, Mr. Whitehorn.

Pillow Fight.—1. A. Powell (British Caudron); 2. J. London (Whitehead's); 3. S. Painter (British Caudron).

2-Mile Walk.—1. J. Theobald (Gwynne's); 2. H. Stevenson (Napier); 3. W. Watts (Grahame-White).

Tug-of-War.—Final, 2 pulls to nil. 1. Sopwith's; 2. Handley Page.

100 Yards Flat.—1. Hicks (Handley Page); 2. Howell (Darracq); 3. Clennell (Napier).

Ladies' Sack Race.—1. Earl (Darracq); 2. Tysall (Handley Page); 3. Baker (Darracq).

880 Yards Flat.—1. Welsh (Napier), 2 mins. 10 secs.; 2. Lewis (Napier); 3. Ward (Darracq).

Half Mile Cycle.—1. Turner (Integral Propeller), 1 min. 13½ secs.; 2. Sheidegger (Napier); 3. Rowles (Darracq).

Boat Race.—1. Highgate; 2. Whitehead "A" team.

Sack Race (Men).—1. Jimpson (Darracq); 2. Cleveley (Napier); 3. Kirke (Aircraft Manufacturing Co.).

100 Yards Veterans.—1. Hallett (Whitehead's); 2. Boyton (Napier); 3. Phillip (Handley Page).

Three Miles Cycle Race.—1. G. Turner (Integral Pro-

pellor), 10 mins. 2½ secs.; 2. W. Sheidegger (Napier); 3. Rowles (Darracq).

Long Jump.—1. J. Hicks (Handley Page), 17 ft. 6½ ins.; 2. W. Clennell (Napier); 3. Russell (Gwynne's).

440 Yards Flat.—1. Howell (Darracq); 2. Hicks (Handley Page); 3. Forster (Whitehead's).

One Mile Flat.—*1. Norman (Gwynne's); 2. Lewis (Napier); 3. Welsh (Napier); 4. Standen (Napier).

Obstacle Race.—1. Holden (Grahame-White); 2. Hook (Handley Page); 3. Anderson (Darracq).

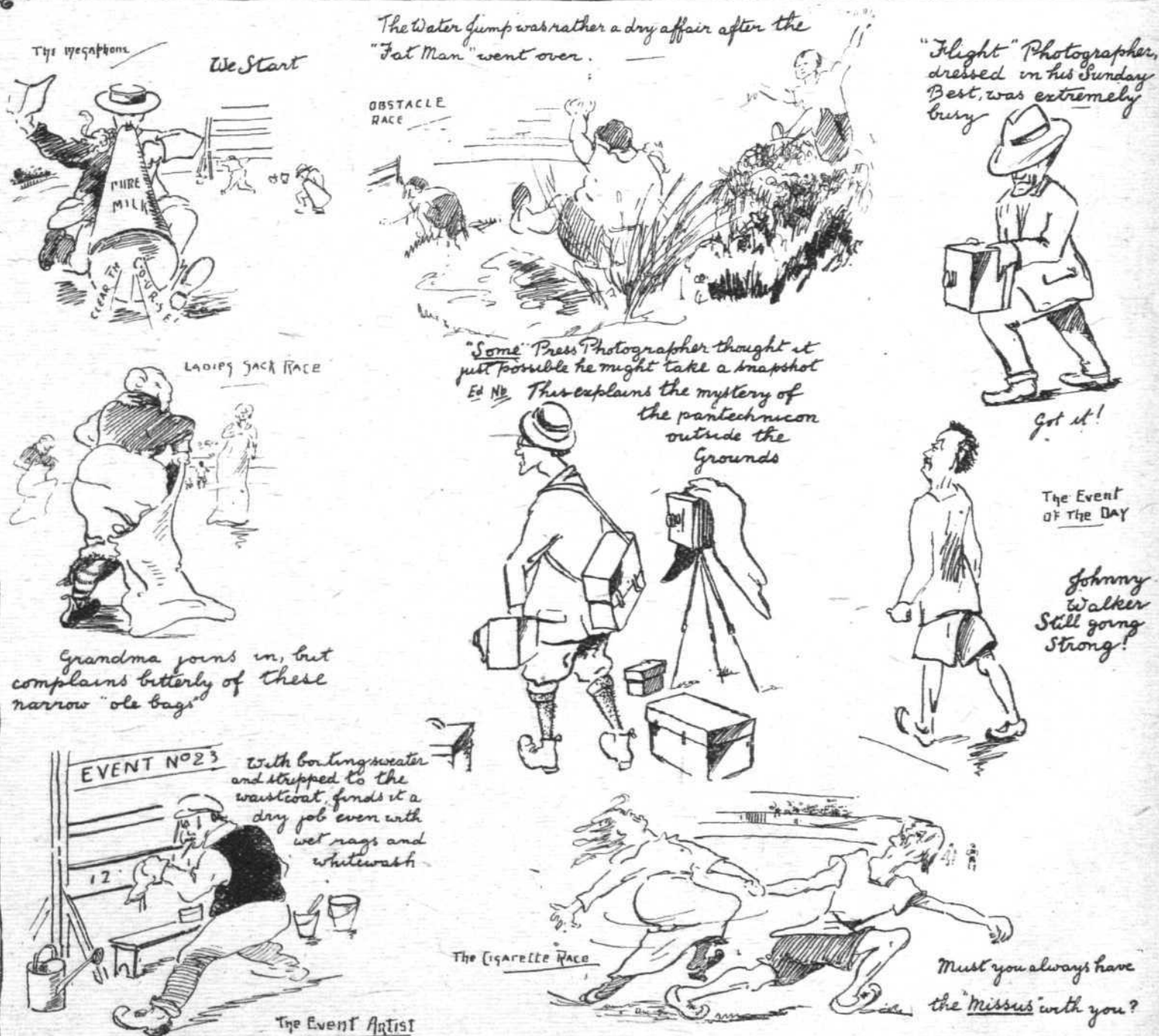
One Mile Relay.—†Dead heat: Sopwith's, Gwynne's.

Inter-Works Championship (Napier holders of Challenge Trophy for 1916).—1. Napier, with 19 points; 2 (dead heat): Handley Page, 10 points; Darracq, 10 points.

The trophies and prizes were worthy of the aircraft industry, and it was noticeable that a great majority were the work of the Goldsmiths and Silversmiths Co., the more prominent emanating from this firm being those presented by the Aircraft Manufacturing Co., Highgate Aircraft Co., Gwynne's Hammersmith Iron Works, British Cellulose and Chemical Manufacturing Co., Whitehead Aircraft, Triplex Safety Glass Co., Darracq Motor Co., Cellon, Ltd. Besides a number of smaller prizes, both the prizes presented by "FLIGHT" were also supplied by the Goldsmiths Co.

* Winner's number was not on programme. Prizes held over until entry forms examined.

† Royal Flying Corps Challenge Cup to be held by each firm for 6 months. Prizes of equal value to the two teams.



Personals

Casualties.

Second Lieutenant TOM LITTLER, R.F.C., was the only child of Mr. and Mrs. John Littler, of Simla, Brixham. He was killed in an aerial action on July 3rd, aged 19. He was educated at Paignton College, and after some experience at the engineering works of the Great Western Railway Co., Swindon, joined the Artists' Rifles O.T.C. in November, 1916, and transferred to the R.F.C. as cadet last March. He obtained his commission on April 12th and his "wings" on May 18th. At the time of his death he had been three weeks at the front.

Observer Sub-Lieutenant CHARLES BERNARD ORFEUR, R.N., reported to have died of wounds abroad, was the second son of Mr. and Mrs. C. E. Orfeur, of Colchester, and was in his 26th year. He was educated at the Colchester Royal Grammar School. He joined the Royal Naval Division in September, 1914, and served through the Gallipoli campaign until he was invalided to Malta with enteric fever. On returning to England he was given a commission in the Royal Naval Division, and he afterwards transferred to the R.N.A.S., in which he was serving as observer at the time of his death. Mr. Orfeur has three other sons, all of whom are serving.

News of the death of Lieutenant SEVERS, R.F.C., whilst acting as observer at the front, has reached his father. At first he was reported through the Queen Victoria Jubilee Association at Geneva to be a prisoner at Strogen, but later his pilot, Lieutenant Norman L. Knight, R.F.C., writing from Strogen under June 8th, dispelled any doubt as to Lieutenant Severs' death. Lieutenant Knight writes: "He had been with me three or four times over the lines before the day we were brought down. . . . On March 28th we were attacked by hostile machines and were outnumbered by five to one. We fought for over 10 minutes, and in that time your son's courage and nerve was marvellous. But luck was against him. Even when he was hit he stood up and fired until guns were useless. The bullets pierced his head and he was dead before I reached the ground."

Lieutenant STUART FOWDEN TROTTER, Canadian Infantry, attached R.F.C., who has died of wounds, was the second son of Mr. J. Glass Trotter, of Stanstead Road, Forest Hill, who recently retired from the assistant clerkship of the Mansion House Police Court.

Second Lieutenant JOHN EDWARD ROSTRON YOUNG, R.F.C., who was killed during the raid on London on July 7th, aged 19, joined the Artists' Rifles in June, 1916, and received his commission in the R.F.C. last February. Second Lieutenant Young was the fourth son of Mr. William S. Young, of 76, Mitcham Lane, Streatham, and of the late Mrs. Young, and grandson of the late Mr. J. S. Young, of Abbot Hall, Kents Bank, North Lancashire, and nephew of the late Lieutenant-Colonel R. R. Young, 2nd Black Watch, and of Major T. S. Young, retired, I.A., and late 10th Suffolk Regiment. He was educated at Streatham Grammar School, and before joining was with the British Bank of Northern Commerce.

Naval honours were paid last week at Plymouth to the memory of Flight Sub-Lieutenant H. LAWRENCE CROWE, of the R.N.A.S., whose death in an accident to the machine which he was flying was announced on June 25th. Flight Sub-Lieutenant Crowe was a son of Mr. and Mrs. Harry J. Crowe, of Toronto, Canada, was a graduate of St. Andrew's College, Toronto, and qualified for his pilot's certificate at the Curtis Aviation School, Newport News, Virginia, U.S.A. He was on special patrol duty when he was killed.

Flight Sub-Lieutenant RONALD BECKETT MORRISON, R.N., who was accidentally killed while flying in England on July 12th, aged 22, was the only son of Mr. and Mrs. John Morrison, of Dunthorpe, Bickley, Kent. He was educated at Charterhouse, and on leaving there entered the works of an engineering firm. When war was declared he joined the R.N.A.S. as a dispatch rider with the armoured cars, and went to Belgium at the beginning of October, 1914, since when he served continuously in France and Gallipoli until he returned to England in February, 1916. He took up his commission as a flight sub-lieutenant, R.N., in the following June, qualified as a pilot, and went out to the front again in December, and remained there until early in July, when he returned to take up a home appointment.

Second Lieutenant W. J. THOMSON, R.F.C., who was killed on June 6th as the result of a flying accident in England, was the only son of W. B. Thomson, of Wynberg, Cape Town, the old Blackheath and international three-quarter of the nineties. He joined the London Rifle Brigade at 17 years of age, and after two years' training, as he was not sent abroad, he transferred to the R.F.C., and had only been flying for one month when he was killed. He was a keen athlete, and a member of the Bedford Modern School fifteen, and was regarded as having the making of a good pilot.

Lieut.-Col. CLIVE MAITLAND WATERLOW, R.E., a Wing Commander of the R.N.A.S., who has been killed in an accident in the Eastern Counties while assisting to moor a naval airship, was one of the most enthusiastic and active airship pioneers in Great Britain. Born in 1886, he was the only son of Mr. David Sydney Waterlow, formerly M.P. for Islington, and grandson of the late Sir Sydney Waterlow. He entered at Woolwich and passed into the Royal Engineers at Chatham from which he went on to the balloon factory at Farnborough under Col.—now General—C. B. Capper. Col. Waterlow held the third airship pilot's certificate issued by the Royal Aero Club, which he obtained on Feb. 14th, 1911. He had made a long study of the airship and its possibilities as a military weapon, and on the airship squadron of the Military Wing of the Royal Flying Corps being transferred to the Naval Wing in January, 1914, he went with it, and it is an open secret that he has rendered brilliant service in that connection since the outbreak of war. Col. Waterlow was only married as recently as June 9th last, his bride being Miss Joan Clare, youngest daughter of Mr. and Mrs. Clare, Farlands Croft, Farnham.

Missing.

Lieutenant A. P. (VAL) MATHESON, R.F.C., who is reported missing on July 13th, is the surviving son of Mrs. Alec Matheson, of Ardarun, Littlehampton, whose two sons, Captain Ian Matheson, Seaforth Highlanders, and Lieutenant Roy Matheson, Royal West Kent Regiment, have been killed within the last eight months.

Married and to be Married.

The marriage between Miss LORNA LODGE and Mr. ROBERT LANGLEY, R.F.C., will take place at St. George's, Edgbaston, at 11.45 on Saturday, July 28th.

The marriage arranged between Squadron-Commander A. J. MILEY, R.N., only surviving son of Dr. and Mrs. Miley, Haven Hill, St. Mary Bourne, Andover, and Mlle. ROBERTE LEGAL, youngest daughter of M. and Mme. Legal, Château de Tulock, Guérande, France, will take place at St. George's, Bloomsbury, on Monday, July 30th, at 12 o'clock. All friends will be welcome at the church.

A marriage has been arranged, and will shortly take place, between the Hon. CONSTANTINE SMITH, R.F.C., younger son of Lord and Lady Colwyn, Colwyn Bay, and MARJORIE METHWOLD, third daughter of Mr. and Mrs. Arthur BIRKETT, 22, Warwick Gardens, Kensington.

A marriage has been arranged, and will take place at the church of SS. Cadoc and Iltyd, Cadoxton-Barry, Glamorgan, at 11 a.m. on Friday, July 27th, between Captain ALFRED MARSHALL THOM, M.C., R.F.C., elder son of Mrs. James Thom, Maryland, Dyce, Aberdeenshire, and EDITH MARJORIE, youngest daughter of Mrs. A. W. NEWMAN, of 108, Holton Road, Barry, Glamorgan.

Items.

The will has been proved of the late ARTHUR EDWARD ELLIS KNOX, of Kingswood, Cavendish Road, Bournemouth, who died on February 26th, aged 79, son of the late Hon. John and Lady Mabella Knox, at £8,781 gross—£8,371 net. The testator left £50 to his nephew, Count Conrad Zeppelin, who was a curate at Bexhill until 1887, when, owing to defective eyesight, he returned to Germany. Count Conrad is a cousin of the late Count Ferdinand von Zeppelin, of airship notoriety, his mother, the late Mr. Knox's sister, having married a brother of Count Ferdinand's father.

Captain JOHN PALETHORPE, who has recently been awarded the M.C., and who has just been reported wounded, is the second son of Mr. Charles H. Palethorpe, of Northfield, near Birmingham, and was educated at Willeshall College, near Wolverhampton. He joined the R.F.C. about 18 months ago after being on active service in France.

ADVISORY COMMITTEE FOR AERONAUTICS. ANNUAL REPORT.

THE following is the full text of the report of the Advisory Committee for Aeronautics for the year 1916-17, which was issued last Saturday:—

The experimental investigations carried out under the control of the Advisory Committee for Aeronautics into the many problems affecting the development of aircraft have been continued and extended during the past year.

Some additions to, and changes in, the personnel of the Committee have been made. Dr. Dugald Clerk was appointed a member in June, 1916. Mr. Henry Fowler became a member on taking up the post of Superintendent of the Royal Aircraft Factory. Commodore Murray F. Sueter has lately retired from membership, after serving for seven years, on receiving a new appointment, and has been succeeded by Commodore Godfrey Paine. General Pitcher, Controller of the Technical Department of the Air Board, has recently been nominated an additional member of the Committee.

Owing to the growth of the work of the Committee in certain directions, Sub-Committees have been formed to advise in regard to special matters. An Internal Combustion Engine Sub-Committee has been appointed under the chairmanship of Dr. Dugald Clerk; Mr. Fowler is acting as chairman of a Light Alloys Sub-Committee. Other Sub-Committees have been constituted from time to time to investigate particular problems.

Many changes and developments in the design and construction of aircraft have taken place as the result of the continued and varied experience gained from their use in warfare under modern conditions. An increasing number of special problems is thus constantly presented for investigation, and these have very closely occupied throughout the year the attention of the staffs engaged in experimental work both at the National Physical Laboratory and at the Royal Aircraft Factory. In addition to aerodynamical research, much attention has been given to questions relating to engines, materials of construction, strength of construction and design, instruments and accessories, as well as to methods of attack from aircraft, and other matters.

Equipment for Experimental Work at the National Physical Laboratory.—Reference was made in the report for last year to the additional equipment provided for experimental work. The wind channels now available comprise two 7-ft. channels, two 4-ft. and one 3-ft. The new 7-ft. channel was completed and brought into use early in the year 1916-17. No important departure has been made in its design from that of the earlier 7-ft. channel, but some minor modifications have been introduced which experience had indicated as tending to greater convenience in working. An air speed of 85 ft. per second can be reached in this channel with an expenditure of 160 h.p. It is doubtful whether further increase in size of channel or in speed of air current would advance existing knowledge to an extent sufficient to outweigh the greatly increased cost and other disadvantages involved. If it should prove necessary, for certain purposes, to conduct experiments on a larger scale and at higher speeds, it would appear, therefore, to be necessary to employ a method in which the model is moved through the air. As is well known, this procedure presents various difficulties, and the securing of even moderately accurate data in this manner is, at the best, extremely laborious. Probably the least troublesome way of applying this method is by installing measuring apparatus on the aeroplane itself, and it seems probable that only in this way can an accurate comparison be obtained between model and full-scale conditions. The matter is of importance, and attention is being given, so far as existing circumstances permit, to the devising of suitable measuring apparatus.

Improved methods of supporting the models under test in the channel have been devised for use in special cases. The effect on the measured resistance of the method of holding the model is often surprisingly large, and without the necessary care and experience in avoiding effects due to interference with the air flow, very large errors may result. The difficulty is of course in general greatest in measurements on forms of small head resistance, e.g., aeroplane bodies and airship envelopes. Earlier measurements on airship models of stream-line shape were made to determine the form of least resistance, and were, in the main, comparative; from the cause mentioned, it is probable that little reliance can be placed on the absolute values then obtained. With the new methods of support the possible error has been greatly reduced, and when full scale values have been determined with accuracy, the prediction of full scale resistance from

the model experiments will be established on a satisfactory basis. The new method of support is employed also in tests of models of complete aeroplanes.

Experimental Work in Aerodynamics.—It is not proposed at present to enter in detail into consideration of questions on which experiment has been in progress. Fliers and designers have, of course, given close attention to matters in which improvement would be of value, and this has led to the repetition and re-examination, from a somewhat modified aspect, of many earlier investigations. The experiments have been of very varied character, and have included tests of models of, probably, all types of aircraft at present employed. A large part of the work has arisen from specific enquiries proceeding from the service departments, but progress has been made with some investigations of more general character. A number of experiments have been carried out relative to the resistance of airship shapes, and further observations on the distribution of pressure in such cases have been made. The investigation into the stability of the aeroplane has been continued. A number of special cases have been examined, and results of importance have been reached. The theory of airship stability has also been investigated. Research into the nature of the flow of fluids round obstacles has been continued. A number of investigations relating to airscrews have been carried out, with a view to increasing the accuracy of prediction of performance, and thus facilitating the design of airscrews for special purposes. Tests on screws to be used as windmills for the production of power have also been made. The work has included a complete series of tests on more than one complete aeroplane model. The information thus derived is of considerable importance for practical purposes in aeroplane design.

Strength of Construction.—A number of questions relating to strength of construction have been investigated, and some general conclusions have been reached tending to simplification of strength calculations. The basis to be adopted in design to secure adequate strength in high speed machines, with the power of rapid manoeuvring essential in aerial fighting, is a matter demanding the most careful consideration. To secure the highest possible speed it is necessary to keep down the weight to a minimum, and the best compromise between these two opposed conditions does not admit of precise determination. This question has received attention, and the manner in which strength varies with increase of dimensions has also been made the subject of investigation. Cases in which vibration has been set up have been examined, and calculations relating to the strength of the body structure have been made.

Engines.—A number of questions relating to engines and engine design have been submitted by the Air Board for consideration by the Engine Sub-Committee. These have required very careful investigation, and the Sub-Committee has been closely occupied since its formation with the various problems which have arisen. Experimental work has been carried out, by request of the Sub-Committee, at the Royal Aircraft Factory; and the Sub-Committee has received much assistance in the examination of special questions both from the Royal Aircraft Factory and from manufacturing firms whose works have been visited.

An extensive series of experiments on radiators has been carried out at the National Physical Laboratory, and other investigations relative to the transfer of heat from surfaces to fluids flowing over them are in progress. These have an immediate bearing on the design of the cooling systems in aeroplane engines. Experiments relating to the performance and efficiency of magnetos have also been made.

Light Alloys.—The use of light alloys in the construction of aircraft and aircraft engines is becoming of rapidly increasing importance, and improvements in the production of light alloys will have great effect on future development. The investigations relating to light alloys which have been in progress for many years at the National Physical Laboratory have been continued, and results of special interest have been achieved during the past year. Suggestions have been made to the Air Board by the Committee which may, it is hoped, help to secure the best conditions in manufacture for the development of such alloys. The formation of the Light Alloys Sub-Committee will be of great assistance in co-ordinating the work on light alloys which is being done in various quarters, and in collecting the information resulting from experimental investigation and manufacturing experience. Experimental work has been carried out for the Sub-Committee at the Royal Aircraft factory, the University

of Birmingham, the National Physical Laboratory, and elsewhere, and arrangements have been made for placing the information obtained at the disposal of manufacturers.

Fabrics, Dopes, &c.—A number of special questions have arisen for investigation in relation to airship and aeroplane fabrics. A large amount of attention has been given to materials for use as dopes, varnishes, &c., and the Laboratory has collaborated with the Military Air Department in an investigation into the behaviour of fabrics, dopes and protective coatings under the conditions of tropical exposure. The results of exposure to ultra-violet radiation have been studied in relation to the effect of sunlight, and conclusions of importance have been reached. The Committee is indebted to Dr. Shakespear, of the University of Birmingham, for information he has placed before them as to the methods developed by him for determining the permeability of fabrics by hydrogen; comparisons have been made with the results obtained at the National Physical Laboratory. Methods of determining the purity of hydrogen have been investigated.

Investigations Relating to Seaplanes.—Tests on models of seaplane floats in the William Froude National Tank have been continued and extended. The provision made last year for an increase in the staff available for carrying out this work has enabled more rapid advance to be made, and a number of important questions have received attention. The methods employed have been improved and elaborated, and new apparatus has been designed whereby additional measurements can be obtained and further information secured relative to special conditions arising in practice.

Special Matters.—As usual, a large number of special questions have been referred to the Committee for advice or investigation. The experiments relating to bombs have been continued, and valuable communications relative to the flight of bombs have been received from the Air Department of the Admiralty and from the Central Flying School. The Committee is indebted to Prof. Karl Pearson, F.R.S., for communicating to them the results of his calculations of bomb trajectories. This question has also been the subject of investigation at the National Physical Laboratory. Questions relating to the attack of aircraft from aircraft have been examined. Problems in connection with the aeroplane compass have been further considered. Other instruments and apparatus for use on aircraft have been investigated. As previously, a number of enquiries have been received from the Board of Invention and Research and the Munitions Inventions Department, and investigations have been carried out at their request at the National Physical Laboratory and at the Royal Aircraft Factory.

Reports from the Experimental Stations of the Air Services.—A number of communications have been received during the year relating to experimental work carried out by the R.N.A.S., and by the Testing Squadron of the Royal Flying Corps. Many of these have been of great interest and value, and of much assistance in the application of the results obtained from the model experiments and in the estimation of aeroplane performance. The Committee visited on various occasions during the year Military and Naval Air Stations, as well as the Royal Aircraft Factory and the National Physical Laboratory, and witnessed many interesting experiments and trial flights.

EXPERIMENTAL WORK AT THE ROYAL AIRCRAFT FACTORY.—**Engine Experiments.**—Much research has been made into various methods for improving the output and the reliability of aeroplane engines. A large number of radiators of various types have been tested, and an efficient type has been standardised. Great progress has been made in the development of the air-cooled engine. Work has been done on the compensation of carburettors for variation of air density and a device for improving the performance of engines at great heights has been tested on several engines.

Full Scale Aeroplane Experiments.—The measurement of the resistance of aeroplanes in flight has been continued with the object of confirming the model experiments and an instrument for measuring the resistance directly has been developed. The distribution of air pressure over the surface of the wing of an aeroplane in flight has been measured and further experiments on these lines are in progress. Experiments have been made on longitudinal and lateral stability of aeroplanes in flight, and much theoretical work on the same subjects has been done. Measurements have also been made of the disturbance of the air behind a propeller to obtain data which are required in the design of new machines.

Instruments.—The behaviour of various types of magnetic compass in an aeroplane in flight has been investigated. Two new types of bombsight have been developed, and are now being tested. The improvement of the standard aeroplane instruments has been continued, and a number of

special instruments have been devised for use in connection with full scale experiments on aeroplanes. The means of communication between pilot and observer have been improved.

Fabrics, Dope, &c.—Weathering tests on fabrics and experiments on the influence of humidity on their strength have been made. The development of a calendered fabric has received attention. The deteriorating effect of various agents (bacteria, light, &c.), has formed the subject of considerable research. The experiments on the composition of dopes, varnishes, and pigments and on fluxes, paints, and oils have been continued.

Light Alloys.—Much experimental work has been done to arrive at the most suitable aluminium alloys for engine parts. Experiments have also been carried out in the application of the alloys which have been developed at the National Physical Laboratory.

METEOROLOGICAL WORK.—Experimental work in meteorology has been mainly in connection with the enquiry into the location of distant thunderstorms and the tracing of their progress across the map by means of a properly organised system of observations at various stations. In this enquiry valuable assistance has been rendered by various officers of the Admiralty, Royal Engineers and Royal Flying Corps. The Meteorological Office Observatories at Richmond and Benson have also been in co-operation, and apparatus has been lent by Prof. Peddie, of University College, Dundee. A portable hut has been installed for the accommodation of the assistant, close to the receiving station. On some occasions the progression of thunderstorms across the map has been satisfactorily identified, although the identification on other occasions was uncertain. Further attention is necessary in order to develop an apparatus which is more directly suitable for the purpose than that which is at present in use, in consequence of the variability of the sensitiveness, which with the present form of apparatus is unavoidable. In addition, an enquiry into the variation of the gustiness of wind between day and night has been provided for by the erection of an anemometer with its vane at 140 ft. above the ground; and for the purpose of this enquiry Captain Cave, R.E., officer in charge, has lent two thermographs in order to determine the corresponding variation in the temperature of the air. Observations have also been made of the variation of the wind with height close to the ground; and a large number of observations of pilot-balloons have been made and duly reported.

Signed on behalf of the Committee,
RAYLEIGH, President.

June, 1917.

The Advisory Committee for Aeronautics.

The members of the Committee, as at present constituted, are: The Right Hon. Lord Rayleigh, O.M., F.R.S. (President); Dr. R. T. Glazebrook, C.B., F.R.S. (Chairman); Dr. Dugald Clerk, F.R.S.; Mr. Horace Darwin, F.R.S.; Sir E. H. Tennyson d'Eyncourt, K.C.B.; Mr. Henry Fowler, A.M.Inst.C.E., M.I.M.E.; Sir G. Greenhill, F.R.S.; Lieut.-General Sir D. Henderson, K.C.B., D.S.O.; Mr. F. W. Lanchester, M.Inst.C.E.; Mr. H. R. A. Mallow, F.R.S.; Lieut.-Colonel Mervyn O'Gorman, C.B.; Commodore Godfrey Paine, C.B., M.V.O., R.N.; Prof. J. E. Petavel, F.R.S.; Brigadier-General D. Pitcher; Sir Napier Shaw, F.R.S.; Secretary, Mr. F. J. Selby, Bushy House, Teddington, Middlesex.

The Sub-Committees.

The members of the Sub-Committees referred to in the opening of the report are as follows:—

Engine Sub-Committee.—Dr. Dugald Clerk (Chairman); Mr. F. W. Lanchester; Lieut.-Colonel Mervyn O'Gorman; Mr. Henry Fowler; Dr. T. E. Stanton, representing the National Physical Laboratory; Wing Commander W. Briggs, R.N.; Lieut.-Commander T. B. Barrington, R.N.V.R., and Captain G. W. A. Brown, representing the Air Board; Lieut.-Colonel R. K. Bagnall Wild and Captain R. H. Verney, representing the Aeronautical Inspection Department; with the Chairman of the Advisory Committee for Aeronautics (*ex officio*).

Light Alloys Sub-Committee.—Mr. Henry Fowler (Chairman); Lieut.-Commander C. F. Jenkin and Prof. F. C. Lea, representing the Air Board; Captain H. P. Philpot, representing the Aeronautical Inspection Department; Mr. A. W. Johns, Chief Constructor, representing the Director of Naval Construction; Dr. W. Rosenhain, representing the National Physical Laboratory; with the Chairman of the Advisory Committee for Aeronautics (*ex officio*).



IN the Report of the Advisory Committee for Aeronautics, for the year 1916-17, which we give in extenso elsewhere this week, will be found several interesting references to work carried out at the National Physical Laboratory. Thus, to mention but a few examples, "work has been done on the compensation of carburettors for variation of air density and a device for improving the performance of engines at great heights has been tested on several occasions." The importance of this particular line of research can scarcely be exaggerated, although, under present conditions, we must leave it to our readers to arrive at their own conclusions as to the exact nature of this device. The "measurements of the disturbance of the air behind a propeller" should provide some very useful data for estimating the resistance of parts of an aeroplane in the slip stream. In view of our article, entitled "Metal in Aeroplane Construction," the paragraph dealing with *Light Alloys* is, to us, especially interesting, and we are pleased to note that "arrangements have been made for placing the information obtained at the disposal of manufacturers." Does this sentence, we wonder, apply equally to the bulk of all the other experiments? If not, why not? The N.P.L. is essentially a National Institution.

SKILLED air-craft workers are more and more urgently in demand, yet the fatuous methods of official recruiting are such that men unfit for any ordinary military duties continue to be industrially demobilised, to the swelling of the ranks of military hospital cases, and the detriment of our "getting on with the war," by putting skilled men on to floor-scrubbing jobs and the like. One typical case, of many, concerning the output of aeroplanes, is placarded by the *Daily Mail* in its *exposé* of the "orgy of waste" of our man-power which is still blatantly rampant in beauraucratic circles, in the following:—

"An Exeter railwayman came to London on July 23rd, to lay before the military authorities the following history of his son, a 'gunner':—

"Age 24 next birthday. Seven and a half years' apprenticeship and service as an electric wireman and fitter. Rejected for the Navy on account of hernia. Rejected for the Army. Rejected on 'pink form' examination. Services refused at the Royal Dockyard. Went to work for an aircraft manufacturer. Examined under the Review of Exceptions Act. Passed C 2. Called up, sent to Exeter, Newport, Winchester, and finally to Woolwich for a trade test. Passed the test. Received a Protection Certificate as a skilled munition maker. Sent to Borstal Heath. Sergeant and sergeant-major received his request to be sent back to aircraft making. No result. Asked to do scrubbing and washing work. Sent to Bradford as a gunner.

"The father of this man was sent by *The Daily Mail* to the Director of Recruiting's Department, where an inquiry into the case was promptly begun. If the man starts again making aircraft accessories he will owe it to his father's energetic action and not to any intelligence on the part of the half-dozen officers through whose hands he has passed during the last two months."

No wonder the demand for aeroplanes cannot be overtaken.

APROPPOS the recent suggestion of the Lord Mayor for the tolling of St. Paul's bell as an air-raid warning to London, the City Coroner, referring to ways and means, remarked last week at one of the multiple air-raid inquests which he has to hold, that "he had never heard the syrens, and the previous day he heard no sound signals, nor saw any coloured smoke. As for St. Paul's bell, he had sat at that court for sixteen years, and had never heard the bell."

FOR both sides, it is good hearing to learn that French and British officers have been selected to help instruct American airmen who have recently arrived in France.

NAVAL officer Max Winkelmann, one of the Donnington Hall German prisoners of war, who recently escaped and were re-captured, was too valuable a prize to let loose again. His intimate knowledge of England had already assisted considerably in Zeppelin visits over this country, and his

return to the Vaterland, therefore, would have been doubly precious to the Gott-strafters of Blighty. But where is it these Hun gentry get their civilian clothes and good British money to enable them to start upon these little summer outings.

A LITTLE light was let into the methods employed, with the assistance of the R.F.C., for overcoming enemy resistance and obstacles at the front, by Field-Marshal Sir Evelyn Wood the other day at the Ongar Red Cross Hospital. This, of course, was not the first occasion upon which the same plan has been adopted by our General Staff, but it is, we believe, the first time, the fact has been set out so definitely by a military expert, holding the position of Sir Evelyn Wood. The particular reference was to the very carefully pre-arranged tactics to be followed, the forethought, and prevision exercised in the assault and capture of the Vimy and Messines Ridges in April and in June. "It is possible," said Sir Evelyn, "that some of you have seen in the United Service Institution the model to scale of the ground at Waterloo, which I can affirm, as the result of several examinations of ground and model, is accurate. It occupies a large room, but it is only a miniature to the model, about 100 yards by 40 yards, which was prepared for the instruction of the Division detailed to assault a certain sector of the line. All the officers to be employed were ordered to study it carefully; on it were shown the smallest impediments, wire, shrubs, undulations, the enemy's sunken batteries, and carefully-concealed dugouts, all of which had been located accurately by our aircraft. The operations which gained us possession of those ridges, where immense numbers of three brave nations had previously fallen, were as carefully rehearsed as are any of Shakespeare's great plays in London."

It's just as well that "explanations" were forthcoming, and that they were quite convincing, in Parliament on Monday regarding that aeroplane escort of Princess Mary's, upon her recent journey to Southend, as it would otherwise have been a bit awkward to let the onus of inaccuracy rest upon our gracious Queen, in view of her expressions of interest, to the Mayor of Southend, through her Private Secretary, "in the fleet of aeroplanes which escorted the special train during the latter part of the journey."

DURING the last air-raid the windows of one house were blown outwards, the plaster and ceilings fell, and doors were thrown off their hinges, and yet the occupant—a woman—experienced surprise on hearing that the house had been struck by a bomb. She was under the impression that a new 'bus route had been opened.—*Punch*.

ANOTHER commonsense recognition of justice to our Service workers at home is announced. The strip of gold braid on the sleeve of the uniform which was instituted last year as a sign that a soldier had been wounded while serving abroad, and which was recently authorised to be worn also by members of the military nursing services, may in future be worn by soldiers and nurses wounded by the enemy while serving at home. The Army Order states that approval is given for the award of the gold braid distinction to officers, soldiers, members of the military nursing services, members of Voluntary Aid Detachments, and special probationers employed in military hospitals who are wounded by the enemy whilst serving in this country.

IN case any of our readers may not quite have followed the distinctive markings for American aircraft, published the other week in "FLIGHT," the following, which is a brilliant hot-weather gem from one of our evening contemporaries, may help to solve any doubt that may exist:—

"I learn that the American Navy aircraft are to have a distinguishing mark in the shape of a white star, with a red centre, on a circular background of blue; while the Army aeroplanes may be recognised by a five-pointed white star inside of a blue circumscribed field, with the centre of the star red. The shades of red, white and blue will be the same as those used in the American flag."

It will be noted that "FLIGHT" did not give the important information contained in the final sentence.

WITHOUT doubt the "Raid-Warning" chaos will settle itself with time and experience, but in the meantime about the simplest—and to our mind the most sensible—"alarm" suggested so far is that of "Invalided Officer," who writes:—

"It seems to me very extraordinary that it has not occurred to some member of the Government the use to which the policeman's whistle can be put to warn us of impending raids. If every Bobby, Special, and secret service man were instructed to give a series of short, sharp blasts on their whistle for a period of five minutes or less, within a couple of minutes every man, woman and child in London would be aware of what to expect. The method of blowing this alarm has, as you see, been suggested to me from the military 'Alarm,' and is quite distinctive from the piercing and annoying taxi call or Bobby's 'Stop thief!' and the volume of sound would be greater.

"This method seems simple, effective, without cost, and does not make you imagine that a raid is in progress as Londoners thought yesterday morning when those naval rockets went off; nor does it give you a crick in the neck star-gazing. If still thought necessary, the Bobby on the bicycle can also blow as he goes along, to call attention to the porous plaster on his chest. The 'All clear' could be sounded by longer blasts with a slight pause between each; this would effectively clear all 'funk-holes.' How can people in 'funk-holes' at present see the perambulating porous plaster with its second label?"

A SAFE weighing three-hundredweight has been stolen from a branch post-office in the Gray's Inn Road. It is believed that in the excitement caused by an air-raid alarm, it was snatched up by a customer who mistook it for his hat. —*Charivari.*

NO LONDON RAID RAID-IOGRAPHS.

OLD gentleman, *en deshabille*, leans out of his bedroom window, and proceeds to search the sky with a pair of field-glasses. Old lady, also in undress uniform, appears at another window, and calls out: "Hallo! Father, what are you a-lookin' for—submarines?"

THERE was great fun in one small side street in the West End. People were leaning out of every window, and there were many outside the houses, discussing the raid, when—fifteen or twenty minutes AFTER the affair was over—a solitary policeman appeared on a bicycle, wearing a very self-conscious air and a pair of placards tied on with much string, warning the populace to take cover. He was greeted, as the Parliamentary reports would say, with Loud and Prolonged Laughter on all sides. Swarms of children ran after him cheering with delight, and dogs snapped excitedly at his heels. Presumably, he was on his way homeward, but no dog on Derby Day, and no dust-cart preceding a Royal Procession, ever had a more embarrassing reception, and he hastily followed his own advice and "took cover." In that district he was certainly looked on as quite the best part of the raid.

It was quite tantalising to mount a roof in the middle of the West End, as one of our correspondents did, and hear the guns firing in many places, but to be totally unable to see a single machine up, owing to the atmospheric conditions. There were many complaints, also, at the unseemly hour of the raid from those who like to take their only chance of an extra hour or so in bed on a Sunday morning.

"X" AIRCRAFT RAIDS.

IN view of the decision of the Government not to allow details of places visited by enemy aircraft to be published, we are, as before, giving to each one an index number. Eventually, when details are available, we shall give the respective information under these index numbers, which will facilitate easy reference to each particular raid.

"X 67" Raid (July 22nd).

THE following *communiqués* were issued by the Field-Marshal Commanding-in-Chief, Home Forces, on July 22nd:—

"11 a.m.

"A squadron of enemy aeroplanes, variously reported at from fifteen to twenty-one in number, approached Felixstowe and Harwich at 8 o'clock this morning. Some bombs were dropped, but the heavy fire from the anti-aircraft defences caused the enemy formation to split up, part returning overseas and part proceeding south down the Essex coast. The latter party were heavily engaged by gunfire all down the

TEN YEARS AGO.

Excerpts from the "Auto." ("FLIGHT's" precursor and sister Journal) of July, 1907. "FLIGHT" was founded in 1908.

KITE AND GLIDER EXPERIMENTS ON CHOBHAM COMMON.

Quite a large gathering assembled on the Sunningdale Golf Links, Chobham Common, last week, to witness the experiments which were being conducted there under the auspices of the Aeronautical Society of Great Britain, this being the concluding meeting of their forty-second session. Fortunately the weather was fine, but unfortunately for the display of scientific kite-flying the atmospheric conditions were thundery, and the air currents extremely uncertain. Three distinct types of apparatus were experimented with, for in addition to the kites of Mr. W. H. Dines, Mr. C. J. P. Cave, Mr. S. H. R. Salmon and Mr. R. M. Balston, Mr. Jose Weiss was present with some of his model gliders, and Mr. Cave sent up some small hydrogen-filled rubber balloons, both as pilots and to carry special recording instruments.

Some of Mr. Weiss' gliders behaved well, performing very bird-like evolutions, but others were too heavy for the prevailing wind currents, and the largest of all refused to glide at all. Some were started with the aid of kites, and were thus dropped from a considerable height, while others were thrown off from the higher ground on the common and circled around for a short distance before falling. The whole proceedings lasted for about a couple of hours. Much that took place was extremely amusing, and for those who are making a study of this intensely interesting problem there was a certain amount that was really instructive.

THE WRIGHT BROTHERS AND GERMANY.

According to Laffan's Agency, the attempt of the brothers Wright to dispose of their flying machine in Germany has met with no success, one official in the ballooning department even going so far as to say that their device was more suitable for an acrobat than a soldier, on the ground that it only carries one man, who is far too busy looking after it to attend to matters of war.

"LA PATRIE."

Further flights during the past week have demonstrated the satisfactory capabilities of the French military airship, "La Patrie." On the morning of the 12th inst. another ascent was made at Meudon, and for 1 hour 50 mins. the airship made a circuit over Suresnes, Sartrouville, Saint-Germain, Louveciennes, Vaucresson and Velizy, thence returning to the point at which the ascent was made, after having made a circular trip of about 40 miles. A second ascent was made in the afternoon, and met with equal success, and other flights are being carried out in order that the military may become accustomed to the working of airships. It is reported that five of the new airships to be built upon the lines of "La Patrie" will be delivered to the French Government by March next.

THE KORWIN AEROPLANE.

Capt. von Korwin, who is the Chief of the Aeronautical Section of the Austrian Army, is reported to be engaged on the construction of an aeroplane of his own design, from which he expects great results. With a machine already constructed a weight of 200 lbs. has been lifted, we are informed, and the confidence which the inventor places in his new model now being made is charming in its naivete, for he is reported to have said that so soon as his machine has stayed in the air for a quarter of an hour he will destroy it with dynamite, in order to prevent others copying it

Essex coast, and finally proceeded homeward without dropping any more bombs. The raiders were pursued out to sea, and heavily engaged by our own aeroplanes, but visibility was low and difficulties of observation very great. Reports of casualties from Felixstowe and Harwich so far reported are as follows: Killed, 8; injured, 25."

"6.30 p.m.

"Since the issue of this morning's *communiqué* three more deaths and one further case of injury have been reported. The total casualties thus amount to: Killed, 11; injured, 26.

"Only insignificant damage to property was caused. A patrol of the R.F.C. encountered some of the hostile machines returning to Belgium, and succeeded in bringing down one of the raiding aeroplanes, which fell into the sea not far from the coast."

"July 24th.

"Since the issue of the last *communiqué* two more deaths are reported to have taken place. The total number of casualties is now: 13 killed and 26 injured."



The British Air Service

"PER ARDUA AD ASTRA"



UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

Royal Naval Air Service.

Comdr. E. A. D. Masterman promoted to Acting Capt., seniority July 14th.
Temp. commissions as Lieut. (R.N.V.R.) have been granted to W. G. Chapman and J. K. Hoyle, seniority July 16th.

Admiralty, July 18th.

The following Prob. Flight Officers (Temp.) have been promoted to Flight Sub-Lieuts. (Temp.), seniority as stated: C. T. Greenwood and H. McK. Reid; May 5th. A. E. Lettington, R. A. Nicholson and L. G. Laws; May 20th. W. W. Scott and T. C. May; June 5th. E. E. Butler, W. C. Wilson, S. S. Flock, A. C. Campbell-Orde, F. D. J. Silwood, A. G. Morris, N. G. Hitch, F. J. Mackie and J. M. Mason; June 20th.

Admiralty, July 19th.

Flight-Lieut. (Temp.) S. P. Martin granted a temp. commission as Lieut. (R.N.V.R.), seniority April 1st.

Admiralty, July 20th.

Flight-Lieut. (Temp.)—L. A. Hervey promoted to Flight-Comdr. (Temp.) seniority June 30th.

E. M. Francis entered as Prob. Flight Officer (Temp.), seniority July 2nd.
L. L. Karstel entered as Prob. Ob. Officer (Temp.), seniority July 20th.
Temp. commissions as Lieut. (R.N.V.R.) have been granted to the following, seniority as stated: W. H. Clegg; July 16th. J. Chapman; July 17th. W. Pollock; July 18th. J. R. Craig and D. R. Parry-Jones; July 19th.

Admiralty, July 23rd.

C.P.O. A. Ledgerwood, promoted to Warrant Officer, 2nd grade (Temp.), seniority July 19th.

P.O. P. T. Rule, promoted to Warrant Officer, 2nd grade (Temp.), seniority July 19th.

W. Amor and R. V. Hart, entered as Warrant Officers, 2nd grade (Temp.), seniority respectively May 30th and June 4th.

Temp. commissions as Lieut. (R.N.V.R.) have been granted to W. H. Mainprize, B.A., and E. W. Cook, seniority July 19th and 21st.

R. K. Knowles granted a temp. commission as Sub-Lieut. (R.N.V.R.), seniority July 19th.

Royal Flying Corps (Military Wing).

London Gazette Supplement, July 17th.

The following appointments are made:—

Flight-Commanders.—From Flying Officers, and to be Temp. Capt. whilst so employed: 2nd Lieut. H. J. Butler, S.R.; June 20th. Temp. Lieut. A. H. Peck, Gen. List; June 23rd. 2nd Lieut. (Temp. Lieut.) W. E. Grosset, Cyclist Bn. (T.F.); 2nd Lieut. (Temp. Lieut.) H. E. Read, Yeo. (T.F.); July 3rd. From Flying Officers: Capt. C. T. Holmes, R. War. R., S.R.; July 1st. Lieut. J. L. Vachell, R.F.A. (T.F.), and to be Temp. Capt. whilst so employed; July 5th.

Flying Officers.—2nd Lieut. R. S. P. Bobby, Lan. Fus. (T.F.), and to be sec'd.; May 17th. Temp. 2nd Lieut. D. O'N. Driscoll, Middx. R.; June 1st. 2nd Lieut. (on prob.) J. D. E. Troop, S.R.; June 3rd. Lieut. C. Barry, R. Ir. R., from a Flying Officer (Ob.); June 15th, seniority Aug. 20th. Temp. 2nd Lieut. J. E. Hibbert, M.C., Gen. List; June 23rd. 2nd Lieut. D. S. Glover, S. Staff. R., S.R., and to be sec'd.; June 24th. Temp. 2nd Lieut. A. J. Cathie, Gen. List, from a Flying Officer (Ob.), seniority July 27th, 1916. Temp. 2nd Lieut. (on prob.) T. W. Manley, Gen. List, and to be confirmed in his rank; June 25th. Temp. 2nd Lieut. H. Haslam, Manch. R., and to be transf'd. to Gen. List; Temp. 2nd Lieut. (on prob.) S. J. Davies, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. (on prob.) J. K. Line, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. (on prob.) R. S. J. Dykes, Gen. List, and to be confirmed in his rank; 2nd Lieut. (on prob.) R. H. Kirkaldy, S.R.; June 26th. Temp. Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: G. P. Robertson, H. D. Arkell, J. L. Haight, D. H. Houston; 2nd Lieut. (on prob.) C. H. Lick, S.R.; 2nd Lieut. (on prob.) G. A. MacKay, S.R.; 2nd Lieut. (on prob.) G. W. Curtis, S.R.; Temp. Lieut. H. A. Pearson, M.C., Gen. List, from a Flying Officer (Ob.), seniority May 25th, 1916; Temp. 2nd Lieut. (on prob.) W. Dawson, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. (on prob.) R. B. Hughes-Rigby, Gen. List, and to be confirmed in his rank; Temp. Lieut. D. H. Scott, M.C., Gen. List, from a Flying Officer (Ob.), seniority July 1st, 1916; Temp. Lieut. R. Johnstone, M.C., Gen. List, from a Flying Officer (Ob.), seniority May 9th, 1916; Temp. 2nd Lieut. (on prob.) F. P. Chaplin, Gen. List, and to be confirmed in his rank; 2nd Lieut. (on prob.) F. P. M. Court, S.R.; Temp. 2nd Lieut. (on prob.) A. E. C. Andrews, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. C. H. Keefe, Gen. List, from a Flying Officer (Ob.), seniority July 28th, 1916; Temp. 2nd Lieut. T. B. Jones, Gen. List, from a Flying Officer (Ob.), seniority Nov. 2nd, 1916; Temp. 2nd Lieut. (on prob.) H. Liver, Gen. List, and to be confirmed in his rank; June 27th. Lieut. P. E. Biggar, Can. A.S.C.; 2nd Lieut. A. L. Kenning, R.F.A. (T.F.), and to be sec'd.; Temp. 2nd Lieut. (on prob.) H. Hargraves, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. (on prob.) A. W. Harrison, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. (Temp. Lieut.) W. F. Findlay, Gen. List, from a Flying Officer (Ob.), seniority June 3rd, 1916. The appointment of Lieut. S. Guillon, Can. Gen. List, notified in the Gazette of Nov. 2nd, is antedated to Aug. 21st; June 28th.

Flying Officers (Observers).—Temp. 2nd Lieut. (on prob.) H. H. Richie, Gen. List, seniority Nov. 28th, and to be confirmed in his rank; Temp. 2nd Lieut. M. H. Harland, R.A., seniority Jan. 9th, and to be transf'd. to Gen. List; 2nd Lieut. G. Leal, R.F.A., S.R., seniority Feb. 21st; 2nd Lieut. J. R. Brown, M.C., High. L.I. (T.F.), seniority Mar. 9th, and to be sec'd.; Temp. 2nd Lieut. J. Webster, M.C., W. York. R., seniority Mar. 14th, and to be transf'd. to Gen. List; Temp. 2nd Lieut. (on prob.) T. P. Ashby, Gen. List, seniority Mar. 19th, and to be confirmed in his rank; 2nd Lieut. (on prob.) F. C. Penny, S.R., seniority May 10th; June 28th.

Balloon Officers.—Temp. Lieut. J. D. Newsom, R.A., and to be transf'd. to Gen. List; 2nd Lieut. A. S. Barnes, R.G.A., S.R.; Temp. 2nd Lieut. S. E. C. Lamb, R.A., and to be transf'd. to Gen. List; Temp. 2nd Lieut. P. Haworth, attd. Lan. Fus., and to be transf'd. to Gen. List; June 28th.

Equipment Officers, 2nd Class.—From the 3rd cl., and to be Temp. Lieuts. whilst so employed: 2nd Lieut. E. Rivers-Smith, S.R.; April 19th. Temp. 2nd Lieut. T. Allen, Gen. List; 2nd Lieut. G. E. Quincey, S.R.; June 1st. 2nd Lieut. A. E. Blackmore, S.R.; June 20th. 2nd Lieut. J. A. Cowling, S.R.; June 30th. Temp. 2nd Lieut. J. W. Jennings, Gen. List; 2nd Lieut. C. J. Brockbank; July 1st.

3rd Class.—2nd Lieut. (on prob.) J. F. Adye, S.R.; April 21st. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: S. C. Crocker; May 20th. S. G. Allen, S. M. Barrett, A. W. Bishop; June 26th. 2nd Lieut. (on prob.) W. S. Smart, S.R.; 2nd Lieut. (on prob.) E. W. Vine, S.R.

Memoranda.—2nd Lieuts. (T.F.), to be Temp. Lieut., whilst serving with R.F.C.: C. Cadman, Yeo.; W. H. Kelley, S. Lan. R.; G. W. Benson, W. Rid. R.; L. J. Jones, Lond. R.; W. E. Nicholson, Yeo.; L. H. Smith, Essex R.; E. H. Marshall, Yeo.; G. J. H. Lascelles, R.H. and R.F.A.; A. L. Darneley, R.G.A.; A. A. Watson, R.H. and R.F.A.; R. Hamilton, M.C., Cyclist Bn.; P. F. Heppell, R.H. and R.F.A.; F. Tymms, M.C., S. Lan. R.; E. F. Haylock, Essex R.; F. C. E. Liardet, Devon R.; W. R. Ashwell, Leic. R.; B. H. Bean, R. W. Fus.; A. R. E. Henley, R. Scots; F. Gilbert, D. of Corn. L.I.; J. K. Aitken, Arg. and Suthd. Highrs.; J. W. Greenhields, Essex R.; W. L. Coutts, Arg. and Suthd. Highrs.; L. B. Goodyer, R. W. Surr. R.; E. A. H. Ward, W. York. R.; J. McCash, R. Highrs.; D. Mackenzie, Lond. R.; H. S. M. Smith, Lond. R.; E. O. Perry, Notts and Derby R.; H. Brokensha, R.E.; G. K. Walker, W. Rid. R.; A. O. Balaam, Suff. R.; W. B. Clark, Yeo.; P. E. Vipond, Manch. R.; M. Thomas, Welsh R.; W. H. Crundall, R.E.; J. Boyd, Sco. Rif.; G. M. Robertson, High. L.I.; E. H. Bryant, Essex R.; W. Pallister, W. York R.; V. V. Cadman, Middx. R.; H. B. D. Harrington, Lond. R.; June 1st.

London Gazette Supplement, July 18th.

Memoranda.—2nd Lieuts., Ind. Army, to be Temp. Lieuts., whilst serving with R.F.C.: J. B. Walsley and R. H. Deakin; June 1st.

Supplementary to Regular Corps.—2nd Lieut. (on prob.) C. H. Sharpe to take rank and precedence in the Corps as if his appointment bore date June 14th.

General List (R.F.C.).—The appointment of Cadet H. Clarkson to a temp. commission as 2nd Lieut., notified in the Gazette of June 9th, page 5715, is cancelled.

London Gazette Supplement, July 19th.

The following appointments are made:—

Flying Officer (Observer).—Lieut. B. W. Fryer, Can. Art.; June 16th, seniority April 28th.

Balloon Officer.—Temp. Capt. J. C. Wolley-Dod, R.A., and to be transf'd. to Gen. List; June 26th (substituted for the notification in the Gazette of July 13th).

Special Appointment (graded as a Park Commander).—Capt. (Temp. Major) the Hon. F. A. Stonor, R.F.C., S.R., from an Equipment Officer, 1st Cl., and to retain his temp. rank whilst so employed; April 4th (substituted for the notification in the Gazette of April 17th).

Equipment Officer, 3rd Class.—Temp. 2nd Lieut. (on prob.) T. L. Edwards, Gen. List, and to be confirmed in his rank; June 26th.

London Gazette Supplement, July 20th.

The following appointments are made:—

Squadron Commanders.—Lieut. (Temp. Capt.) S. H. B. Harris, S.R., from a Flight-Comdr., and from a Group Instr. in Gunnery (graded as Flight-Comdr.), and to be Temp. Major whilst so employed: Lieut. (Temp. Capt.) R. T. Leather, Yeo. (T.F.); Feb. 20th. Capt. M. McB. Bell-Irving, D.S.O., M.C., S.R.; April 7th. Major A. S. W. Dore, Worc. R. (T.F.), from a Flight-Comdr., May 7th. From Flight-Comdrs. and to be Temp. Majors whilst so employed: Lieut. (Temp. Capt.) A. M. Wilkinson, D.S.O., Hamps. R. (T.F.); May 10th. Capt. A. B. Adams, S.R.; June 20th. Capt. C. W. Anstey, S. Wales Bord.; June 28th.

Flight-Commanders.—From Flying Officers, and to be Temp. Capt. whilst so employed: 2nd Lieut. B. A. Peck, R.F.A., S.R.; Temp. 2nd Lieut. G. A. Maclean, Gen. List; June 1st. Temp. Capt. R. F. Stapleton-Cotton, Gen. List, from a Flying Officer; June 16th. From Flying Officers, and to be Temp. Capt. whilst so employed: Lieut. G. D. F. Keddie, Lond. R. (T.F.); Temp. Lieut. G. K. Palmer, Gen. List; 2nd Lieut. J. S. Shaw, S.R.; July 1st. 2nd Lieut. G. L. Lloyd, Yeo. (T.F.); July 6th. Temp. Lieut. A. Roulstone, Gen. List; Temp. 2nd Lieut. A. Bell-Irving, Gen. List; July 7th. 2nd Lieut. H. H. McL. Fraser, S.R.; 2nd Lieut. G. H. Hooper, R.E. (T.F.); July 9th.

Flying Officers.—2nd Lieut. (Temp. Lieut.) D. S. Persse, Yeo. (T.F.), and to be sec'd.; May 31st. Lieut. J. Hood, Arg. and Suthd. Highrs. (T.F.), and to be sec'd.; June 3rd. 2nd Lieut. F. L. Hopps, Yorks. L.I. (T.F.), and to be sec'd.; 2nd Lieut. C. J. G. Etheridge, Yorks. L.I., and to be sec'd.; June 7th. 2nd Lieut. H. E. Tansley, M.C., K. R. Rif. C.; June 9th, seniority Sept. 14th. 2nd Lieut. H. P. W. Laughton, Middx. R. (T.F.), and to be sec'd.; Temp. 2nd Lieut. A. Daws, R. Scots; June 12th. Temp. 2nd Lieut. (on prob.) R. Tyack, Gen. List, and to be confirmed in his rank; June 13th. 2nd Lieut. T. S. Symons, R. Suss. R., S.R., and to be sec'd.; 2nd Lieut. J. R. Paisley, R.G.A., S.R.; June 14th. Temp. Capt. R. F. Stapleton-Cotton, Gen. List, from an Equipment Officer, 1st Cl.; June 15th. Capt. N. Deakin, Yeo. (T.F.), and to be sec'd.; Temp. 2nd Lieut. (on prob.) G. R. Edwards, Gen. List, and to be confirmed in his rank; June 25th. Capt. D. Owen, Can. Gen. List; June 26th. Lieut. J. I. C. O. Gairdner, R. Highrs. (T.F.), and to be sec'd.; Temp. 2nd Lieut. (on prob.) J. T. Orrell, Gen. List, and to be confirmed in his rank; Lieut. E. M. Gilbert, M.C., Essex R., S.R., from a Flying Officer (Ob.), seniority Dec. 18th, 1915; Temp. 2nd Lieut. A. G. Graves, attd. Som. L.I., and to be transf'd. to Gen. List; 2nd Lieut. H. S. Gough, Manch. R. (T.F.), and to be sec'd.; June 27th. Temp. 2nd Lieut. E. G. C. Quilter, Gen. List, from a Flying Officer (Ob.), seniority Oct. 20th; 2nd Lieut. (on prob.) A. C. Nutter, S.R.; Temp. 2nd Lieut. (on prob.) L. W. Walsh, Gen. List, and to be confirmed in his rank; 2nd Lieut. (Temp. Lieut.) R. N. C. Fenton, E. Lan. R. (T.F.), and to be sec'd.; 2nd Lieut. G. E. H. McElroy, R.A., and to be sec'd.; Temp. 2nd Lieut. (on prob.) W. S. McLaren, Gen. List, and to be confirmed in his rank; Temp. Lieut. C. A. Taylor, attd. S. Lan. R., and to be transf'd. to Gen. List; 2nd Lieut. N. F. Northam, Oxf. and Bucks. L.I., and to be sec'd.; June 28th. Temp. Capt. C. N. Jones, Notts. and Derby R., from a Flying Officer (Ob.), seniority Aug. 1st; Lieut. (Acting Capt.) G. W. Calverley, D.S.O., R. Ir. Rif. and to be sec'd.; Capt. J. M. McIlwaine, R. Ir. Rif., S.R.; 2nd Lieut. J. M. Smith, S.R.; Temp. 2nd Lieut. (on prob.) W. B. Swart, Gen. List, and to be confirmed in his rank; 2nd Lieut. (on prob.) D. C. Barrington, S.R.; June 30th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: S. W. Sparks, H. R. Hicks, W. L. Watt; Capt. D. A. Tuck, Yeo. (T.F.), from a Flying Officer (Ob.), seniority Feb. 1st; 2nd Lieut. A. C. Hurst, S.R.; 2nd Lieut. R. K. MacKenzie, S.R. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: J. E. Frost H. M. Beck, O. C. George.

Group Instructors in Gunnery (graded as Flight-Commanders).—Capt. J. H. C. Minchin, Sco. Rif., a Flight-Comdr., from a Wing Instr. in Gunnery (graded as a Flight-Comdr.), vice 2nd Lieut. (Temp. Capt.) W. G. B. Mackenzie, R. Sc. Fus., who reverts to Flying Officer and Temp. Lieut.; Jan. 17th (substituted for notification in the Gazette of Mar. 13th). From Wing Instrs. in Gunnery (graded as Flight-Comdrs.): 2nd Lieut. (Temp. Capt.) M. R. N. Jennings, S.R., and to retain his temp. rank whilst so employed, vice 2nd Lieut. (Temp. Capt.) R. G. Heyn, S.R.; Temp. Capt. C. O. F. Modin, D.S.O., Gen. List, vice Capt. D. E. Ward, Lond. R. (T.F.); June 5th. 2nd Lieut. (Temp. Capt.) A. P.

Hartley, Ches. R. (T.F.), from a Wing Instr. in Gunnery (graded as an Equipment Officer, 1st Cl.), and to retain his temp. rank whilst so employed, vice Capt. J. H. C. Minchin, Sco. Rif., who reverts to Flight-Comdr.; June 30th.

Wing Instructor in Gunnery (graded as a Flight-Commander).—2nd Lieut. (Temp. Lieut.) R. C. Hardie, D. of Corn. L.I., S.R., a Flying Officer, and to be Temp. Capt. whilst so employed, vice Temp. Capt. S. E. Adams, Gen. List, who reverts to a Flying Officer and the rank of Temp. 2nd Lieut.; Mar. 15th.

Instructors in Gunnery (graded as Equipment Officers, 1st Class).—Temp. Capt. C. B. Tidmarsh, Gen. List, a Flying Officer; Capt. H. E. F. Wyncoll, Notts and Derby R., from a Group Gunnery and Armament Insp.; Mar. 22nd. And to be Temp. Capt. whilst so employed; 2nd Lieut. G. H. Higginson, N. Lan. R. (T.F.), and to be secd., vice Temp. Capt. W. H. Miles, Gen. List; April 18th. Temp. Lieut. J. D. Hodgson, Ches. R., and to be transfd. to Gen. List; May 1st. Temp. 2nd Lieut. (on prob.) W. M. Groom, Gen. List, and to be confirmed in his rank; May 16th. Temp. Lieut. C. C. Watts, K. R. Rif. C., and to be transfd. to Gen. List; Temp. 2nd Lieut. B. Elliott, Gen. List; May 23rd. Temp. 2nd Lieut. A. Haywood, R. War. R., and to be transfd. to Gen. List; 2nd Lieut. (on prob.) G. F. P. Warren, S.R.; June 1st. Temp. Major G. P. Myers, Mach. Gun Corps; Capt. A. M. Lester, Lond. R. (T.F.), from A. Cyclist Corps; Capt. D. E. Ward, Lond. R. (T.F.), from a Group Instr. in Gunnery (graded as an Equipment Officer, 1st Cl.); June 5th. From Instrs. (graded as Equipment Officers, 1st Cl.), School of Aerial Gunnery: Temp. Capt. F. G. Wilson, Gen. List; Temp. 2nd Lieut. (Temp. Capt.) S. W. Cooper, Gen. List, and to retain his temp. rank whilst so employed; June 5th. From Wing Instrs. in Gunnery (graded as Flight-Comdrs.): Temp. Capt. S. H. Bird, Gen. List; Temp. Capt. H. E. Dixon, Gen. List; 2nd Lieut. (Temp. Capt.) A. P. Davidson, High. L.I.; 2nd Lieut. (Temp. Capt.) H. J. Brewster, Middx. R.; 2nd Lieut. (Temp. Capt.) C. H. Stokes, S.R.; 2nd Lieut. (Temp. Capt.) A. P. Hartley, Ches. R. (T.F.); Temp. 2nd Lieut. (Temp. Capt.) P. A. Moodie, Gen. List; 2nd Lieut. (Temp. Capt.) R. C. Hardie, D. of Corn. L.I., S.R.; June 5th. And to be Temp. Capt. whilst so employed: Lieut. F. R. Alford, M.C., Can. Inf., from an Asst. Instr. (graded as an Equipment Officer, 2nd Cl.), School of Aerial Gunnery; 2nd Lieut. (Temp. Lieut.) D. H. S. Davies, R. War. R., a Flying Officer; Temp. 2nd Lieut. R. C. Boddie, Gen. List, an Equipment Officer, 3rd Cl.; June 5th. Temp. Lieut. L. J. Gulliver-Cradwick, Essex R., vice Temp. 2nd Lieut. (Temp. Capt.) P. A. Moodie, Gen. List, who reverts to Flying Officer, and relinquishes the rank of Temp. Capt.; Temp. Lieut. H. F. Alton, Gen. List, from an Asst. Instr. (graded as an Equipment Officer, 2nd Cl.), vice 2nd Lieut. (Temp. Capt.) C. H. Stokes, S.R., who reverts to Flying Officer, and the rank of 2nd Lieut.; Temp. 2nd Lieut. L. P. Hault, Gen. List, from an Asst. Instr. in Gunnery (graded as an Equipment Officer, 3rd Cl.); 2nd Lieut. (on prob.) (Temp. Lieut.) L. A. Price, S.R., from an Asst. Instr. in Gunnery (graded as an Equipment Officer, 2nd Cl.), vice Temp. Capt. H. E. Dixon, Gen. List, who reverts to Flying Officer; June 30th. Temp. 2nd Lieut. (Temp. Lieut.) J. H. Gaudin, Gen. List, from an Asst. Instr. (graded as an Equipment Officer, 2nd Cl.), School of Aerial Gunnery; July 13th.

Assistant Instructors in Gunnery (graded as Equipment Officers, 2nd Class).—Lieut. G. H. J. Mercer, D. of Corn. L.I., from an Asst. Instr. (graded as Equipment Officer, 2nd Cl.), School of Aerial Gunnery; 2nd Lieut. (Temp. Lieut.) H. C. Bankart, Middx. R., S.R., a Flying Officer (Ob.); Temp. Lieut. L. J. Gulliver-Cradwick, Essex R., a Flying Officer; Temp. 2nd Lieut. (Temp. Lieut.) J. C. C. Affleck, Gen. List, a Flying Officer; Temp. Lieut. H. Monro, Welsh R., from an Asst. Instr. (graded as an Equipment Officer, 2nd Cl.), School of Aerial Gunnery; Temp. 2nd Lieut. (Temp. Lieut.) R. Gregory, Gen. List, from a Flying Officer (Ob.); 2nd Lieut. J. L. L. Duffus, Gord. Highrs. (T.F.), to be Temp. Lieut. whilst so employed, and to be secd. And to be Temp. Lieuts. whilst so employed; 2nd Lieut. (on prob.) L. A. Price, S.R.; Temp. 2nd Lieut. (on prob.) B. D. Capper, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. H. S. Elliott, Gen. List, a Flying Officer (Ob.); June 5th. Temp. 2nd Lieut. E. P. Jay, Gen. List; June 27th. Lieut. J. N. H. Brooke, 8th L'pool. R. (T.F.), from an Asst. Instr. (graded as an Equipment Officer, 2nd Cl.), School of Aerial Gunnery; June 30th. Graded as Equipment Officers, 3rd Cl.: Temp. 2nd Lieut. N. Goodwin, Gen. List; Temp. 2nd Lieut. J. T. Kyffin, Gen. List, a Flying Officer (Ob.); Temp. 2nd Lieut. T. O. C. Pease, attd. Middx. R., and to be transfd. to Gen. List; Temp. 2nd Lieut. (on prob.) W. G. Foulds, Gen. List, and to be confirmed in his rank; June 5th. Lieut. E. Parker, E. Lan. R., S.R., and to be secd.; 2nd Lieut. F. Chisnall, W. Rid. R. (T.F.), from Temp. Lieut., Mach. Gun Corps; June 17th. Lieut. A. C. H. Dashwood, R. Fus., from Mach. Gun Corps; 2nd Lieut. (Temp. Lieut.) C. H. Holcroft, R. War. R. (T.F.), and to be secd.; 2nd Lieut. (on prob.) F. H. Goodwin, S.R.; 2nd Lieut. W. S. C. Stephens, S.R., an Equipment Officer, 3rd Cl.; June 12th. 2nd Lieut. E. Y. Fitzgerald, Yeo. (T.F.), a Flying Officer (Ob.); June 19th. Capt. M. H. Park, M.C., Can. Art.; Capt. P. K. Paul, High. L.I., S.R., from Mach. Gun Corps; Temp. 2nd Lieut. H. B. Griffith, a Flying Officer (Ob.); Temp. 2nd Lieut. L. P. Hault, Gen. List, a Flying Officer; June 22nd. Temp. 2nd Lieut. W. Douglas, attd. R. Scots, and to be transfd. to Gen. List; June 25th. Capt. G. H. Salaman, Linc. R. (T.F.), and to be secd.; Temp. 2nd Lieut. (on prob.) L. O. Spain, Gen. List; June 28th.

Flying Officers (Observers).—2nd Lieut. W. S. Cattell, Northn. R. (T.F.), and to be secd.; June 29th, seniority Jan. 23rd. Temp. 2nd Lieut. H. G. Holt, M.C., Leic. R., and to be transfd. to Gen. List; June 28th, seniority Mar. 9th. Temp. 2nd Lieut. W. D. Lauder, M.C., Leins. R., seniority Mar. 27th, and to be transfd. to Gen. List; Temp. 2nd Lieut. F. Marshall-Lewis, R. War. R., seniority Mar. 28th, and to be transfd. to Gen. List; 2nd Lieut. G. A. Dixon, High. L.I., S.R., seniority Mar. 30th, and to be secd.; Temp. Lieut. W. Gaunt, Mach. Gun Corps, seniority April 4th, and to be transfd. to Gen. List; June 29th.

Balloon Commanders (graded as Balloon Officers).—From Balloon Officers: Capt. (Temp. Major) J. H. Davies, Ches. R. (T.F.); Temp. Lieut. G. W. Lynn, Gen. List. And to be Temp. Lieuts. whilst so employed: Temp. 2nd Lieut. H. O. Hope, Gen. List; 2nd Lieut. A. D. Wright, R.F.A., S.R.; July 1st.

Balloon Officers. —Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: J. Drew, H. E. Riley, J. G. Pagdin, H. M. Robertson, W. B. Shelton, F. Weston, H. S. Hayward, G. H. Knight, F. P. Watson; June 15th. H. S. Terrell; June 16th.

Adjutant. —Lieut. (Temp. Capt.) W. O. Raikes, E. Kent R., S.R., from a Flying Officer, and to retain his temp. rank, but without the pay and allowances of that rank; April 17th.

Equipment Officers, 1st Class. —From the 2nd Cl., and to be Temp. Capt. whilst so employed: Lieut. G. L. Main, S.R.; 2nd Lieut. (Temp. Lieut.) H. W. Mills, S.R.; 2nd Lieut. (Temp. Lieut.) J. J. Botterill, S.R.; June 1st. Capt. E. D. Dent, R. Dub. Fus., S.R., from a Flying Officer; 2nd Lieut. (Temp. Lieut.) L. R. Kerridge, S.R., from the 2nd Cl., and to be Temp. Capt. whilst so employed; July 2nd.

2nd Class. —From the 3rd Cl.: 2nd Lieut. (Temp. Capt.) A. Sowden, W. York. R. (T.F.). And to be Temp. Lieuts. whilst so employed: Temp. 2nd Lieut. E. H. Hooper, Gen. List; 2nd Lieut. L. Davies, S.R.; 2nd Lieut. H. C. S. Bullock; June 1st. 2nd Lieut. (Temp. Capt.) C. Higham, Manch. R. (T.F.); June 12th. 2nd Lieut. R. A. W. Collet, S.R., and to be Temp. Lieut. whilst so employed; June 14th.

3rd Class. —Lieut. J. S. D. Harries-Jones, S.R., reverts from the 2nd Cl.; July 4th.

School of Aerial Gunnery.

Commandant (graded as a Flight-Commander).—Lieut. (Temp. Capt.) A. G. H.

Carr, York and Lanc. R. (T.F.), from a Wing Instr. in Gunnery (graded as a Flight-Comdr.), and to retain his temp. rank whilst so employed; April 24th.

Chief Instructor (graded as a Flight-Commander).—Temp. Capt. A. R. C. Cooper, Gen. List, from a Wing Instructor in Gunnery (graded as a Flight-Commander); May 8th.

Instructor (graded as a Flight-Commander).—2nd Lieut. (Temp. Capt.) R. G. Heyn, S.R., from a Group Instr. in Gunnery (graded as a Flight-Comdr.), and to retain his temp. rank while so employed, vice Temp. Capt. F. G. Wilson, Gen. List; June 5th.

Assistant Instructors (graded as Equipment Officers, 2nd Class).—Temp. Lieut. H. Monro, Welsh R.; Feb. 15th. Temp. 2nd Lieut. (on prob.) F. L. Bristow, Gen. List, to be confirmed in his rank, and to be Temp. Lieut. whilst so employed; May 21st. 2nd Lieut. (Temp. Capt.) P. H. R. Whittet, S.R., relinquishes his appointment as an Asst. Instr. (graded as an Equipment Officer, 2nd Cl.), Mar. 24th.

Memoranda. —Bt.-Col. (Temp. Brig.-Gen.) W. S. Brancker, R.A., to be Temp. Major-Gen. while employed as Deputy Dir.-Gen. of Military Aeronautics; June 22nd.

2nd Lieuts. to be Temp. Lieuts. whilst serving with R.F.C.: A. E. Boulbee, Northn. R., S.R.; Feb. 1st. G. C. Young, Sea. Highrs.; K. E. Ward, Welsh R.; J. C. Preston, Bedf. R.; C. Joiner, E. Surr. R.; G. M. Lees, R.G.A.; B. K. B. Barber, Northd. Fus.; N. W. Wadham, Rif. Brig.; F. J. B. de S. La Terrière, Lrs.; J. M. Leach, York. R.; June 1st.

Temp. 2nd Lieuts. to be Temp. Lieuts. for duty with R.F.C.: H. Butler, A. W. Bird, D.S.O., C. F. Drabble, R. W. Scoles, A. W. Rowlands, E. C. J. Elliott, J. R. Middleton, J. R. Hopkins, T. Kennie, C. A. McConchie; Dec. 30th. R. A. Pierpoint, H. E. Davis, C. W. M. Whitlock, J. S. Giffard, W. A. Reeves, C. T. Brown, A. S. Mackenzie, E. Nightingale, J. W. Aldred, M.C., N. Cox-Walker, C. H. Bird, J. G. Kidd, L. Gellatly, E. T. C. Brandon; Feb. 1st. E. N. A. Remington, attd. R. Berks. R.; M. H. Colley, R.E.; W. A. Barnes, attd. R. Lanc. R.; G. F. W. Zimmer, attd. R. Berks. R.; C. C. Miller, W. Rid. R.; M. H. Armstrong, attd. Middx. R.; A. M. T. Glover, K. O. Sco. Bord.; C. C. G. Girvan, Lan. Fus.; R. G. H. Davis, attd. R. W. Kent R.; L. Booth, attd. R. W. Surr. R.; E. Vevers, R. War. R.; A. S. Poynton, R.E.; H. L. Barlow, R.E.; June 1st.

To be Temp. 2nd Lieuts. (on prob.) for duty with R.F.C.: L. A. Harbord, late Temp. Capt., Gen. List; June 20th. E. S. Daniel, H. R. Wilson; June 29th. Sergt. W. G. Barry, from H.A.C. (T.F.); July 2nd.

Supplementary to Regular Corps. —The following resign their commissions: 2nd Lieut. L. R. Bradbury, 2nd Lieut. (on prob.) P. S. Haythorpe; July 21st. 2nd Lieuts. (on prob.) are confirmed in their rank: C. Boyd, W. R. Rhodes, C. E. Power, S. H. Cummings, C. G. Boot, W. Calvert, W. J. Walford, E. W. Vine, F. O. Sonderby, W. S. Smart, E. S. Pitman, C. G. Meudell, R. G. Nelson, C. N. Henderson, W. F. Hendry, E. W. Kemp, A. T. W. Lindsay, N. P. Dixon, C. E. Kingsford-Smith, S. J. Schooley, J. F. Avey, W. Dee, A. E. Palfreyman, S. F. Napper, R. K. MacKenzie, J. M. Smith, A. C. Hurst.

London Gazette Supplement, July 21st.

The following appointments are made:—

Flight-Commander. —2nd Lieut. (Temp. Lieut.) F. W. Winterbotham, Yeo (T.F.), from a Flying Officer, and to be Temp. Capt. whilst so employed; July 10th.

Flying Officers. —2nd Lieut. M. E. Gonne, R. Fus., and to be secd.; May 23rd. 2nd Lieut. M. Besso, Manch. R. (T.F.), and to be secd.; May 31st. 2nd Lieut. W. J. H. Morgan, S. Wales Bord. (T.F.), and to be secd.; Capt. R. N. F. Mills, A.S.C. (T.F.); June 1st. Temp. 2nd Lieut. (on prob.) H. Horrocks, Gen. List, and to be confirmed in his rank; June 2nd. Temp. Lieut. W. Jones, Worc. R., and to be transfd. to Gen. List; June 8th. 2nd Lieut. J. D. Gilbert, Yeo. (T.F.), from R. Suss. R. (T.F.), and to be secd.; June 10th. Temp. 2nd Lieut. S. Wilkins, Gen. List, from a Flying Officer (Ob.), seniority April 24th; Temp. 2nd Lieut. (on prob.) G. O. Lowe, Gen. List, and to be confirmed in his rank; June 11th. 2nd Lieut. D. G. Barnett, R.F.A., S.R., from a Flying Officer (Ob.), seniority Oct. 10th; Temp. 2nd Lieut. (on prob.) J. C. Walker, Gen. List, and to be confirmed in his rank; June 12th. 2nd Lieut. P. H. S. Tozer, Ind. Army Res. of Officers; June 23rd. Temp. 2nd Lieut. (on prob.) W. H. T. Williams, Gen. List, and to be confirmed in his rank; Temp. 2nd Lieut. R. L. S. Morrice, attd. L'pool. R., and to be transfd. to Gen. List; June 26th. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: E. T. Vautier, L. M. Isitt; June 26th. J. H. Latchford, L. C. Wates, L. M. Fletcher, P. Wilson; June 29th. Temp. 2nd Lieut. E. H. Keir, attd. R. Lanc. R., and to be transfd. to Gen. List; 2nd Lieut. C. H. Harrison, Yorks. L.I. (T.F.), and to be secd.; Temp. 2nd Lieut. (on prob.) L. W. B. Parsons, Gen. List, from a Flying Officer (Ob.), seniority May 15th, 1916, and to be confirmed in his rank; 2nd Lieut. (on prob.) E. J. Stephens, S.R.; Temp. 2nd Lieut. (on prob.) O. D. Haist, Gen. List, and to be confirmed in his rank; Temp. Lieut. J. S. Dunkerley, Gen. List, from a Flying Officer (Ob.), seniority July 12th, 1916; 2nd Lieut. (on prob.) C. G. Crane, S.R.; Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: E. A. R. Hills, B. Monkhouse; June 30th. Temp. Lieut. J. Hutchings, attd. S. Lan. R., and to be transfd. to Gen. List; July 1st. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: G. G. Thomson, J. E. Lamb, H. Rothery; July 2nd. S. G. Cragg; July 3rd. The surname of 2nd Lieut. (on prob.) I. M. Maclean, S.R., is as now described, and not as in the Gazette of June 22nd.

Flying Officers (Observers). —2nd Lieut. G. S. Day, Lond. R. (T.F.), and to be secd.; July 3rd, seniority Mar. 1st. Temp. 2nd Lieut. G. Baines, attd. Middx. R., and to be transfd. to Gen. List; May 26th, seniority Mar. 26th. 2nd Lieut. L. Speller, R. W. Surr. R. (T.F.), and to be secd.; June 7th, seniority April 8th. 2nd Lieut. G. Rodgers, W. Rid. R. (T.F.), and to be secd.; June 1st, seniority April 18th. Lieut. M. T. Trotter, Can. Rif. Brig.; May 31st, seniority April 23rd. Temp. 2nd Lieut. A. D. Light, Gen. List; June 3rd, seniority April 23rd. Lieut. W. E. Lockhart, Can. Engrs.; June 11th, seniority June 4th.

Balloon Officers. —Temp. 2nd Lieut. S. Buckenham, Gen. List; June 15th. Lieut. H. K. Black, Can. Art.; June 18th.

Equipment Officers, 1st Class. —2nd Lieut. (Temp. Lieut.) H. J. C. Smith, S.R., from the 2nd Cl., and to be Temp. Capt. whilst so employed; June 1st. 2nd Class. —From the 3rd Cl.: Capt. A. L. Gregory, M.C., Dorset R., S.R.; July 1st. And to be Temp. Lieuts. whilst so employed: 2nd Lieut. T. P. Whitcomb, Essex R. (T.F.); Temp. 2nd Lieut. A. S. Poynton, R.E.; 2nd Lieut. H. Straker, S.R.; July 1st. 2nd Lieut. C. Lambert, S.R.; July 2nd.

3rd Class. —Lieut. F. McRae, Canadian Mil. Forces; May 3rd. Temp. 2nd Lieut. (on prob.) R. J. Murchison, Gen. List, and to be confirmed in his rank; June 20th. Temp. 2nd Lieut. S. W. Gilbey, A.S.C., and to be transfd. to Gen. List; July 2nd. Temp. 2nd Lieut. (on prob.) S. Williamson, Gen. List, and to be confirmed in his rank; July 3rd.

General List. —From R.F.C., to be Temp. 2nd Lieuts.:—June 26th: 1st Cl. Air-Mech. McLeod Neville Staigbt, 1st Cl. Air-Mech. H. G. Toyé, Gnr. P. Seymour, Corpl. S. H. Tigg, 2nd Cl. Air-Mech. B. Z. Simpson, Flight-Sergt. E. C. Robinson, Sergt. H. Haworth. To be Temp. 2nd Lieuts. (on prob.): J. K. Bell, C. E. Maryon, H. L. B. Buchanan; June 29th. H. Smith; July 12th. Sergt.-Major S. G. Williams, from R.F.C.; July 4th.

Supplementary to Regular Corps. —2nd Lieut. (on prob.) D. A. Jardine is removed from the Army, the King having no further occasion for his services as an Officer; June 1st. 2nd Lieut. (on prob.) D. L. Daly resigns his commission on account of physical unsuitability as a Pilot or Ob.; July 22nd.

London Gazette Supplement, July 23rd.

The following appointments are made:—

Staff Officer, 3rd Class (graded for purposes of pay as a Staff Capt.)—Capt. W. G. M. Crothers, Suff. R., S.R., vice Capt. A. W. A. Harker, R.G.A.; June 4th.**Flying Officers**—2nd Lieut. E. H. Chater, Norf. R., T.F., and to be sec'd.; May 27th. 2nd Lieut. (Temp. Lieut.) C. R. Davidson, High. L.I., from a Flying Officer (Observer); June 5th, with seniority from March 6th. Temp. 2nd Lieut. (on prob.) R. Croucher, Gen. List, and to be confirmed in his rank; June 14th. Lieut. J. R. Wilson, R.E., T.F., from a Flying Officer (Observer); June 10th, with seniority from September 6th, 1916. Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: W. M. Dulin; June 25th. J. R. M. Simpson, P. W. L. Jarvis; July 1st. A. H. Gearing, W. G. Woods, T. R. Kirkness, S. C. B. West, A. F. Kemp; July 2nd. E. C. Hucklebridge, S. W. Watson, R. M. Whitehead, L. H. Patterson; July 3rd. 2nd Lieut. (on prob.) A. E. Hempel, S.R.; July 5th. Temp. 2nd Lieuts. (on prob.) Gen. List, and to be confirmed in their rank: W. R. McGee, H. H. Tonks; July 6th.**Flying Officers (Observers)**—Lieut. H. D. Scowcroft, R.F.A., T.F., and to be sec'd.; February 25th, with seniority from November 12th, 1916; Lieut. R. H. Brewis, Lan. Fus., T.F., seniority December 15th, 1916, and to be sec'd. Temp. 2nd Lieut. J. M. Watson, R. Highrs., seniority January 16th, and to be transfd. to Gen. List. 2nd Lieut. B. E. Leeson, Ches. R., T.F., seniority February 4th, and to be sec'd.; March 30th. Temp. 2nd Lieut. E. R. Watson, att'd. Essex R., and to be transfd. to Gen. List; May 15th, seniority February 16th. Lieut. H. B. Burgess, C. Gds., S.R., from a Flying Officer; June 7th, seniority May 11th; Lieut. F. W. Harley, R. Highrs., T.F., and to be sec'd.; June 2nd, seniority January 29th. Temp. Lieut. H. C. Barlow, Lan. Fus., and to be transfd. to Gen. List; June 17th, seniority February 22nd. Temp. Lieut. V. Smith, North'd Fus., and to be transfd. to Gen. List; May 27th, seniority March 5th. 2nd Lieut. R. C. Rodger, M.C., R.F.A., S.R.; May 25th, seniority March 12th. Temp. 2nd Lieut. F. S. Ferriman, Oxf. and Bucks L.I., and to be transfd. to Gen. List; June 6th, seniority March 16th. Lieut. J. V. Anglin, Canadian Gen. List; May 27th, seniority April 9th. Lieut. H. Cotton, Canadian Inf.; May 27th, seniority April 22nd. Temp. Lieut. H. W. Smith, Notts and Derby R.; July 2nd, seniority April 24th. Temp. 2nd Lieut. (on prob.) P. F. H. Webb, Gen. List; July 2nd, seniority May 16th, and to be confirmed in his rank. Temp. 2nd Lieut. L. Smith, att'd. Notts and Derby R., and to be transfd. to Gen. List; July 5th, seniority March 4th. Temp. 2nd Lieut. J. McDonald, Glouc. R., and to be transfd. to Gen. List; July 4th, seniority March 7th. Temp. Lieut. H. Mitton, R.A., seniority March 14th, and to be transfd. to Gen. List. 2nd Lieut. T. R. G. Marshall, A.S.C., from Temp. Lieut. and Adj't., seniority April 2nd, and to be sec'd. Temp. 2nd Lieut. E. M. Smith, Notts and Derby R., seniority from April 3rd, and to be transfd. to Gen. List. Lieut. A. L. Galbraith, Canadian Inf.; July 1st, seniority April 6th (July 5th). Temp. Lieut. M. K. Jones, R.A., seniority April 11th, and to be transfd. to Gen. List; 2nd Lieut. W. B. Judd, Durh. L.I., seniority from April 13th, and to be sec'd. 2nd Lieut. W. D. Kennard, Lond. R., T.F., seniority from April 23rd, and to be sec'd.; July 4th. Lieut. W. Crowther, Canadian Inf.; July 5th, seniority from April

28th. Temp. 2nd Lieut. (on prob.) C. H. Barton, Gen. List, and to be confirmed in his rank; July 4th, seniority May 16th. 2nd Lieut. H. J. B. Bain, Arg. and Suth'd Highrs., T.F., seniority August 4th, 1916, and to be sec'd. 2nd Lieut. E. L. Walters, Devon. R., S.R., seniority February 16th, and to be sec'd. 2nd Lieut. H. G. L. Fletcher, Notts and Derby R., T.F., seniority from February 19th, and to be sec'd. Temp. 2nd Lieut. W. S. V. Oliver, Lan. Fus., seniority March 3rd, and to be transfd. to Gen. List. 2nd Lieut. H. B. Hill, R.W. Kent R., S.R., seniority March 12th, and to be sec'd. 2nd Lieut. J. C. Currie, R.F.A., S.R., seniority March 13th. Lieut. H. E. M. Porter, Can. Inf., seniority April 21st. Temp. 2nd Lieut. W. M. Pierce, Midd'x R., seniority March 7th, and to be transfd. to Gen. List. Temp. 2nd Lieut. W. D. McKeown, Lens. R., seniority March 12th, and to be transfd. to Gen. List. 2nd Lieut. G. D. A. Heys, R.A., seniority March 15th, and to be sec'd. 2nd Lieut. J. F. Stallard, D. of Corn. L.I., seniority March 24th, and to be sec'd. Lieut. A. Willans, Ca. Inf., seniority April 28th; July 5th.

July 4th, seniority May 16th: 2nd Lieut. (on prob.) A. E. Woodbridge, S.R. Temp. 2nd Lieut. (on prob.) A. E. Wear, Gen. List, and to be confirmed in his rank. Lieut. S. F. Trotter, Can. Gen. List; July 4th, seniority May 31st. Temp. Lieut. J. A. Stedman, M.G. Corps, and to be transfd. to Gen. List; July 5th, seniority June 3rd. July 6th: Temp. 2nd Lieut. C. E. Day, Manch. R., seniority March 16th, and to be transfd. to Gen. List. Lieut. W. G. Bell, Can. Inf., seniority April 8th. 2nd Lieut. E. F. Boyd, R.F.A., T.F., and to be sec'd. 2nd Lieut. M. O. Haskell, R.F.A., S.R., seniority April 12th. 2nd Lieut. J. B. Smith, R. Highrs., T.F., seniority April 20th, and to be sec'd.

Balloon Officers—Temp. 2nd Lieuts. (on prob.), Gen. List, and to be confirmed in their rank: A. L. J. Bulley; June 29th. B. J. T. Bosanquet; July 1st.**Equipment Officers, 3rd Class**—June 6th: 2nd Lieut. J. Black, Middx. R., T.F., and to be sec'd.; 2nd Lieut. G. M. Wingate, Essex R., T.F., and to be sec'd. 2nd Lieut. E. M. V. Fielding, S.R. Temp. 2nd Lieut. S. A. Salmon, Gen. List. Temp. 2nd Lieut. L. R. Peirce, Gen. List. Temp. 2nd Lieut. W. D. Buchanan, Gen. List. Lieut. R. O. C. Bush, R. Dub. Fus., from a Flying Officer; June 14th. Temp. 2nd Lieut. W. A. Winter, Gen. List, from a Flying Offr. (Observer); July 1st.**Memoranda**—Capt. T. W. C. Carthew, D.S.O., from Bedf. R., S.R., to be Temp. Capt., Gen. List; July 24th, with seniority from April 9th, 1916, and to retain the temp. rank of Lieut.-Col. while emp'd. as a Wing Comdr., R.F.C.; July 24th.**To be Temp. Captain**—Temp. 2nd Lieut. C. T. Cleaver, M.C., Gen. List, for duty with R.F.C.; July 24th.

Temp. 2nd Lieut. D. H. Houston, Gen. List, to take rank and precedence in the R.F.C. and in the Army as if his appointment as Temp. 2nd Lieut. bore date April 15th.

Gen. List (R.F.C.)—Temp. 2nd Lieut. J. C. Ludski resigns his commission; July 24th. J. C. Sharp, from Temp. Capt. (att'd.), Sco. Rif., to be Temp. Lieut. on appt. as probx. to Ind. Army; June 23rd.

AVIATION IN PARLIAMENT.

Height of London Raiders.

MR. LYNCH, on July 17th, asked the Under-Secretary of State for War whether, on the occasion of the last raid by German aeroplanes over London, an estimate was made by the help of range-finders of the height of any of the aeroplanes; and, if so, what were the maximum and minimum heights?

MR. MACPHERSON: Yes; but by height-finders, not range-finders. The heights recorded were from 12,500 to 15,000 ft.

MR. BILLING: Is it not a fact that the majority of the English pilots who viewed this from the ground assert that the height was less than 6,000 ft.?

MR. MACPHERSON: No, it is not.

MR. LYNCH: Has the hon. gentleman given the minimum height in those figures?

MR. MACPHERSON: 12,500 ft.

MR. BILLING: Where does the hon. gentleman get those figures from? Is it from the people who were criminally negligent in the defence of London or from unbiased observers?

MR. LYNCH asked the Under-Secretary of State for War whether he can state from the information of officers present the height from which Lieut. W. G. Salmon, R.F.C., fell when attacking the German air squadron over Dartford?

MR. MACPHERSON: There is no information from eye-witnesses, but it is probable that the fight took place at over 12,000 ft.

MR. LYNCH: Is the hon. gentleman aware that the officers of this corps who were present assert that he fell from 2,000 ft., and, if so, on what ground did they give that information to the Coroner?

MR. MACPHERSON: As I have said, the information which we have at the Foreign Office is that it is probable that a fight took place at over 12,000 ft.

Casualties from Anti-Aircraft Guns.

MAJOR NEWMAN asked the Under-Secretary of State for War whether he has collected the information necessary to enable him to give the number of casualties, fatal and otherwise, caused by our own shell-fire on the occasion of the recent air raid; and whether, in the event of any disclosure not being in the public interest, he would furnish the same to hon. members for their private information?

MR. BRACE: My hon. friend has asked me to reply to this question. I shall have no objection to showing the figures to hon. members if they desire to see them. I may say that the casualties caused by our own gunfire are not so numerous as has been suggested in some quarters, but they were sufficiently serious to emphasise the great importance of taking cover when the anti-aircraft guns are in action.

MR. HOGGE: Does that mean that the Government do not intend to publish the full number of casualties, and that they can only be ascertained if we wish to see them privately?

MR. BRACE: These casualties will not be published, but if the hon. member cares to see them I will show them to him.

MR. FABER: If the casualties have taken place, what is the objection to our knowing how many of our own people have been killed by our own guns?

MR. HOGGE: Can the hon. gentleman say if the list of casualties given in the statement issued by the Press Bureau is not therefore correct, and that we cannot ascertain whether it is correct unless we see privately the figures which the hon. gentleman has got?

MR. BRACE: The hon. member must take my answer as I have given it. If he cares to see the numbers of these particular cases I will show them to him or to any other hon. member.

MR. MACCALLUM SCOTT: Is this not one of those occasions in which the complete facts will have the best effect on public opinion?

MR. BRACE: I will consult my right hon. friend the Home Secretary again. Perhaps the hon. member will put down a question.

MR. BILLING: Is it not a fact that the inquests themselves are greater in number than the officially reported casualties?

MR. BRACE: No.

The London Air Raid.

MR. BILLING asked whether any military enquiry has been held into the reasons which permitted the enemy air squadrons raiding this country to return unchallenged and unchecked on Saturday, July 7th?

MR. MACPHERSON: The enemy aircraft did not return after the raid on July 7th "unchallenged and unchecked," and details of the number of hostile machines which were brought down have been already announced. No military court of enquiry has been held into the circumstances of the raid, but as is always the case the preparations to meet it and the action taken have been carefully investigated with a view to improving the defence arrangements.

MR. BILLING: In view of the fact that this is not the report of a Commission, but that it is an ocular demonstration of inefficiency for every citizen of London to witness, can the hon. gentleman see his way clear to institute some court of enquiry to ascertain who is responsible for this utter lack of defence?

MR. HOGGE: Can the hon. gentleman say whether the machines brought down in the North Sea by the Royal Naval airmen were part of the fleet of German machines that reached London?

MR. MACPHERSON: I must have notice of that question.

MR. HOGGE: My hon. friend refers to the machines that were brought down; is it true that only one was brought down?

MR. MACPHERSON: I am answering a question on that point later.

Improvements in Defences.

MR. BILLING asked the Prime Minister whether he can give the country the assurances that our air defences, both as regards aircraft guns, efficiency of gunners and air squadrons have been reorganised and improved since the occasion of the last enemy air raid over England?

The Chancellor of the Exchequer (Mr. Bonar Law): The answer is in the affirmative.

MR. BILLING: In view of the fact that this answer is a condemnation of past administration, will the right hon. gentleman make some enquiry into the matter?

MR. SPEAKER: That is argumentative.

R.F.C. Commissions.

MR. BILLING asked the Under-Secretary for War how many non-commissioned officers and men of the R.F.C. have been trained as pilots since the outbreak of war; and, if it is not in the interests of the country to give the exact figures, will he say what proportion of the pilots of the R.F.C. so trained are men of non-commissioned rank?

MR. MACPHERSON: The total number of non-commissioned officers and men from the ranks is 271. The total R.F.C. cadets who have become pilots is 536. About 20 per cent. of the non-commissioned officers and men have received commissions. All the cadets have received commissions.

MR. BILLING: Are we to understand that these 271 are non-commissioned officers who have received commissions or are they non-commissioned officers flying as non-commissioned officers; and will the hon. gentleman consider the advisability of promoting non-commissioned officers, even if they are not fit to qualify socially, as pilots, so that their services may be utilised for the defence of the country?

MR. MACPHERSON: There is no question of social distinctions, and I am sure that the first branch of the Service will resent such a suggestion, as well as the Air Service itself. Every man is given a commission upon his merits.

Fatal Accidents to Pilots.

MR. BILLING asked the Under-Secretary of State for War whether, in the event of a pilot being killed in practice flying in France, he is reported in the casualty list as killed on active service; whether a pilot killed engaging the enemy aircraft, either Zeppelins or aeroplanes, by day or by night, over London, if killed or injured, is reported in the usual casualty list as killed or wounded on active service; and, if not, will he say why this distinction is made?

MR. MACPHERSON: If an R.F.C. pilot is killed in France otherwise than in action his name appears in the published casualty list as "accidentally killed."

If one is killed or injured in action with the enemy in England his name appears in the published list as killed (which means killed in action) or as wounded.

Mr. Billing: Are we to understand that the results of Coroners' inquests are necessary before it can be ascertained whether one of our pilots has been killed in action or died accidentally in engaging the enemy over this country?

Mr. Macpherson: The hon. member is to understand no such thing. As he knows very well, the law requires that if any man is found killed or has died in unknown circumstances the reason of his death has to be investigated. As I pointed out the other night to my hon. friend, the War Office always take care that if an R.F.C. man or any other soldier is killed in the service of his country in this country the fact is duly reported to the Coroner.

Mr. Billing: Are we to understand that every soldier who is killed will have a Coroner's inquest?

Mr. Billing asked how many British pilots were killed or injured, and how many British machines were smashed either by the enemy or by forced landings, or otherwise, during the air raid throughout this country on July 7th?

Mr. Macpherson: Two pilots were killed in action, one pilot was wounded, one observer died of wounds. Two aeroplanes were destroyed by the enemy; two aeroplanes crashed from other causes.

Tampering with Aircraft and Sheds.

Mr. G. FABER asked the Prime Minister what is the penalty in the case of German prisoners of war working in this country, enemy aliens, neutrals and British subjects respectively, who are proved to have tampered with air sheds, or aeroplanes in this country?

Mr. Macpherson: I am afraid that it is not possible for me to answer this question. The punishment inflicted would, of course, depend upon the nature of the offence.

Mr. Faber asked the Prime Minister whether the Commander-in-Chief in this country, or who, is primarily responsible for the safeguarding from treacherous tampering by persons living in this country with military air sheds and aeroplanes situated or operating here; and whether, in view of the ever-increasing importance of this branch of the Air Service, he will consider the desirability of some official or officer being forthwith appointed whose chief duty it should be to see that no possible precautions shall be omitted whereby such treachery can be guarded against?

Mr. Macpherson: General Officers Commanding-in-Chief Commands are responsible under the direction of Field-Marshal, Commander-in-Chief, Home Forces. It is not considered necessary to make any alteration in the system such as my hon. friend suggests.

Mr. Billing: Is the hon. gentleman aware that this is a very grave and serious matter, which has caused considerable dissatisfaction, and will he at least ask the Department to give it very serious consideration?

Mr. Macpherson: I can assure my hon. friend and the House that the War Cabinet and the Committee over which the Prime Minister presides will make the necessary inquiry.

Mr. Faber: May we feel assured that the Report will come in time, and not too late?

Mr. Macpherson: I hope so.

Protected Areas.

Mr. FABER asked the Prime Minister whether he will forthwith take steps to provide that aerodromes and air sheds in this country, not already situated within prohibited areas, shall themselves be constituted prohibited areas within prescribed limits?

Mr. Macpherson: The protection afforded to aeroplanes and air sheds in this country under military arrangements exceeds that which would result from constituting the site a prohibited area under the Aliens Restriction Order. If my hon. friend will supply particulars of any such site which appears to him to be ineffectually guarded, I shall be pleased to have the matter enquired into at once.

Mr. Herbert Samuel: Are we to understand that the Committee just mentioned by the Under-Secretary for War, and which is presided over by the Prime Minister, is a Committee which will enquire into the matters mentioned in this question, or is it the Committee already announced to the House that is to enquire into the air defences of London generally?

Mr. Macpherson: It is an enquiry into the defences of London, and, I understand, into such questions as are germane.

Mr. Faber: Are we to understand that enemy aliens, or even naturalised Germans, are allowed to live close to places where there are aerodromes and aircraft sheds?

Mr. Macpherson: My hon. friend knows that this is purely a question for the Home Office.

Mr. Faber: Oh, really!

Mr. Macpherson: This is purely a question of allowing enemy aliens in this country to live in one area or another, and that is purely a matter for the Home Office and not the War Office. If my hon. friend will put down a question to the Home Secretary he will give him the answer.

Mr. Faber: Are we to be bandied or battered about from one Department to another?

Mr. Billing: Is it not the fact that enemy aliens and uninterred Germans do visit these aerodromes?

Sir John Simon: Is it the fact that all orders that individuals are not to reside in prohibited areas do not come from the Home Office, and is it not rather the fact that the orders come from the Officer Commanding the district?

Mr. Macpherson: I think that is so.

Mr. Faber: Then why recommend me to go to the Home Office? Why the Home Office, when it is the Officer Commanding the district who issues the orders?

Mr. Speaker: These supplementary questions are sprung upon a very hard-worked Under-Secretary, and it is quite possible that he may have overlooked the fact that the original order comes from the Officer Commanding the district. If hon. members would put down their questions they would get considered answers.

Mr. Faber: I should be the last to desire to press the hon. gentleman unduly. Mr. Billing: Will it be in order for the Under-Secretary to give us an assurance—[Hon. members: "Sit down!"]—that in future no enemy aliens will be allowed to visit British aerodromes?

Aeroplane Construction.

Mr. BILLING asked the Minister of Munitions if every available factory suitable for the construction of aeroplanes and not devoted to other war work is being employed to the utmost by the Ministry of Munitions?

The Parliamentary Secretary to the Ministry of Munitions (Sir L. Worthington Evans): The answer to this question is in the affirmative.

Mr. Billing: May we understand that any firm capable of building aeroplanes, if not building them now, will receive orders at once? May we understand that?

Balloon Descent in London.

MAJOR NEWMAN asked the Parliamentary Representative of the Air Board whether he is aware of the danger to property and obstruction to traffic caused by the descent of a non-dirigible balloon in Holborn on the 11th inst.; are the frequent patrols of flights of non-dirigible balloons over the Metropolis made at the instance of the military authorities; are the machines manned by members of the R.F.C. or other recognised corps of combatants; and, if not, what will be their position if met by hostile machines in the course of their flights?

Mr. Macpherson: The danger to property and obstruction to traffic caused by the descent of a balloon in Holborn on the 11th inst. are greatly regretted. The descent was due to the uncertain and erratic air currents which prevailed on that day, and caused dropping of ballast and eventually forcing the balloon to land. This landing was successfully made without casualties through the valuable assistance rendered by the police in handling the crowd. No damage was done except the breaking of five or six telephone wires, and within twenty minutes of the landing the road was clear for traffic. The answers to the second and third parts of the question are in the affirmative. The last part of the question, therefore, does not arise.

R.N.A.S. and Raiders.

SIR HENRY DALZIEL, on July 18th, asked whether members of the R.N.A.S. are allowed to go up and attack enemy aeroplanes whilst flying over land or only over the sea?

Dr. Macnamara: The R.N.A.S. work in the closest co-operation with the R.F.C. in regard to home defence, but invariably attack enemy aircraft whenever and wherever seen.

Sir H. Dalziel: Does that answer my question?

Dr. Macnamara: Certainly.

Sir H. Dalziel: They are allowed to attack over land and sea?

Dr. Macnamara: Certainly.

Princess Mary's Visit to Southend.

Mr. LYNCH asked whether the aeroplanes that escorted Princess Mary on her journey to Southend-on-Sea were fighting aeroplanes?

The Under-Secretary of State for War (Mr. Macpherson): I am informed that Princess Mary was not escorted by any aeroplanes of the R.F.C.

Mr. Lynch: Can the hon. gentleman account for the fact how all the London newspapers stated that she was?

Mr. Macpherson: I am responsible only for my own office.

R.F.C. and Raiders.

SIR H. DALZIEL asked the Under-Secretary of State for War whether members of the R.F.C. are allowed to attack enemy aeroplanes whilst flying over the sea or only over the land?

Mr. Macpherson: The R.F.C. are allowed to attack hostile aircraft over land or sea.

Col. Claude Lowther: Is the hon. gentleman satisfied that there is sufficient cohesion between the naval and the land Air Services?

Mr. Macpherson: Yes, Sir.

Aeroplane Spare Parts.

MAJOR KERR-SMILEY asked the Under-Secretary of State for War whether a large number of aeroplanes have recently been out of action owing to the lack of spare parts; whether the manufacturers are instructed to supply a sufficient number of spare parts for every machine made; and will he say who is responsible for deciding that the proportion of spare parts is requisite and for seeing that such a proportion is consistently maintained?

The Parliamentary Secretary to the Air Board (Major Baird): The answer to the first and second parts of the question is in the affirmative. As regards the third part of the question, the proportion of spare parts per machine is decided by the two Services, who prepare the Schedule referred to. Additional spares required for the further maintenance of machines beyond the original spares are ordered by the Supply Department on receipt of requisitions from the Services.

Major Kerr-Smiley: Is it a fact that this shortage of spares is affecting the training of our pilots, and also that several brand new machines, such as Spads, have recently been dismantled in order to provide requisite spares for similar machines?

Major Baird: Every effort is being made to effect a remedy, but the large number of new machines has overtaken the supply of spares, which were not available. Everything is being done, however, to ensure a supply.

Mr. Watt: Does the hon. gentleman think there is sufficient cohesion between the R.F.C. and the Royal Naval Flying Corps?

Major Baird: Yes, sir; but that does not arise out of this question.

Aeroplanes.

SIR H. DALZIEL asked the Prime Minister whether, in view of the need for more aeroplanes, he can give any reason why the workers in the aeroplane shops of certain large factories in Birmingham, Bolton and elsewhere are now on short time?

Major Baird: There are two contractors for aeroplanes in Birmingham and both have a large number of aeroplanes on order. In Bolton there are no aeroplane factories. As regards the rest of the country, there are a few cases where the work on certain components is ahead of the work on other components, and this unbalancing may cause some temporary diminution in the working hours on this particular operation or process. This is not singular to aeroplane factories, but occurs to a slight extent in all industries.

Col. C. Lowther: Have the Government any idea of the output of aeroplanes in Germany; if so, are they keeping pace with them?

Mr. Speaker: That question had better, I think, be put down.

Air Raid Sufferers. Compensation Scheme.

Mr. ALLEN BAKER asked whether the Government are prepared to grant compensation to all sufferers from air raids irrespective of whether they are insured or otherwise?

Mr. Bonar Law: The Prime Minister recently received a deputation on this subject and arranged that, in communication with the representatives of the deputation, a scheme should be worked out. This will be done forthwith, but I am not in a position to anticipate the details, which require careful investigation by the departments concerned.

Mr. P. A. Harris: Will there be no necessity, then, to insure against air raids?

Mr. Bonar Law: The hon. member must wait until the details are arranged.

Peter Hooker and Company.

Mr. PRINGLE asked the Chancellor of the Exchequer whether the Treasury have delayed giving their consent to the issue of shares in Peter Hooker and Co.; whether this issue was recommended by the Air Board and Ministry of Munitions; whether Mitchelson and Co. have purchased these shares; and whether it is in the public interest that departments have recommended that sanction should be given to the issue of shares which are to be purchased by a firm in which a Minister of the Crown is, or was lately, financially interested and which will receive large orders from the Government?

Mr. Bonar Law: The answer to the first part is in the affirmative. As regards the second part, the Air Board and the Ministry of Munitions recommended that the company should be given facilities for the increase of their output, but made no recommendation on the financial aspect of the particular scheme submitted by Peter Hooker, Ltd. I am not aware whether Messrs. Mitchelson and Co. have purchased the shares. As regards the last part of the question, Lord Rhonda relinquished his partnership in this firm as and from June 30th last, and has now no interest whatever, direct or indirect, in it. A public announcement to this effect has been made.

A.I.D. Examiners.

Mr. MACVEAGH asked the Parliamentary Representative of the Air Board whether he can state in currency the total cost of inspection for the financial year 1916-17; whether he can state how many examiners, chief examiners and assistant examiners are now employed in addition to the 23 inspectors and 104 assistant inspectors; and whether, as the previous occupation and

engineering experience is carefully recorded in every case, he will now state how many in each class had previous experience in engineering work?

Sir W. Evans: In view of the answer my right hon. friend gave to the hon. member's question on Monday, I am afraid that it would not be in the public interest now to give the cost of this inspection in terms of money, since a simple sum in arithmetic would give the cost of the material supplied. The Directorate of Inspection at present employs 182 chief examiners and 1,484 examiners. There is at present no grade of assistant examiner. The Director of Inspection satisfies himself as to the qualifications and experience of every candidate for the post of chief examiner or examiner. The records are not kept in such a form as to enable me to give a detailed reply to the last part of the question at such short notice.

Police Pensions.

Mr. BILLING, on July 19th, asked the Prime Minister whether the Ministry of Pensions accepts liability for compensation to, or pensions allotted to the dependants of, police officers who may be injured or killed while exposing themselves to military risks in carrying out the instructions of the Home Office with regard to warning the public of approaching hostile aircraft?

The Chancellor of the Exchequer (Mr. Bonar Law): In such cases constables who are injured and the widows and children of constables who are killed will receive the pensions granted under the Police Acts, when police officers are injured or killed in the execution of their duty. The statutory liability for the pension, &c., rests upon the police authority, and, without legislation, could not be transferred to the Pensions Ministry.

London Defences.

Sir H. DALZIEL asked the Prime Minister whether he will give the complete list of the Committee it has been stated is enquiring into the air defences of London, particularly in relation to the recent raid; and will the House be informed of the results of the enquiry?

Mr. Bonar Law: The Committee, as has already been announced, consists of the Prime Minister and General Smuts. They have been in close consultation with the representatives of the various departments concerned. The report, which must necessarily be confidential, has been considered by the Cabinet, and the recommendations made are being carried into effect.

Mr. BILLING asked the Under-Secretary of State for War whether certain air squadrons were recently withdrawn from the London defences; whether any protest was made by Lord French; whether such protest was in writing; and, if so, whether he will lay the same upon the Table of the House?

Mr. Macpherson: I have nothing to add to what was said by my right hon. friend the Prime Minister in the Secret Session.

Mr. BILLING: Is the hon. gentleman aware that a newspaper with a big circulation makes this definite statement and challenges the Government to suppress it, and is any action going to be taken?

Mr. Speaker: The hon. member must not mind what the newspapers say.

Mr. Hogge: Can we definitely know, in view of the position held by Lord French, whether this is true or not?

Mr. BILLING: May I ask whether Lord French's reputation is to be sacrificed or not?

American Wood for Aircraft.

Sir H. DALZIEL asked the Minister of Munitions whether any complaints have been received from aeroplane manufacturers concerning the quality of recent Government purchases in Seattle, United States of America, of silver spruce used in the construction of aeroplanes; and whether he is aware that there were no complaints of this kind when purchases were made through private traders?

Sir W. Evans: No, Sir. The timber which is now being supplied to contractors is the best available.

Aircraft Engines (Output).

Mr. Peto asked the Minister of Munitions whether he is satisfied that no increase of output of aircraft engines would be possible if the fundamental principle of rivalry in quality and quantity of the finished product were applied wherever companies could be equipped to turn out the completed engine; and, if so, whether he will take steps to apply this principle at once?

Sir W. Evans: The principle of rivalry is adopted in respect to design only. Once a design has been adopted, quality is adequately ensured by the present method of inspection. The manufacture of the same engine by various firms would not necessarily increase output, and in the case of most engines the total possible output would be diminished, as compared with concentration on one firm, especially where it involved providing special facilities, organisation and tools.

Mr. BILLING: Are not the reasons for delaying the output of engines because approved designs are altered by the official experts?

Sir W. Evans: No; I do not agree.

Mr. Peto asked the Minister of Munitions whether, in the placing of orders for the construction of aircraft engines, orders have been divided into component parts on account of patent rights held by companies for the construction of some essential parts; and whether his department will enquire whether the output could be accelerated if in any case where orders for parts only are at present placed with any company orders were placed for complete engines?

Sir W. Evans: The placing of orders for parts of aircraft engines is arranged with a view to expedition in delivery, and the existence of patent rights is not taken into consideration in the placing of such orders. Whether orders are placed for complete engines or for parts depends entirely on the existing or potential capabilities of the plant of the manufacturing firm.

Mr. BILLING: Would the hon. gentleman consider the advisability of cancelling all those orders for parts which have been given for engines which themselves are already cancelled?

Sir W. Evans: I do not think my hon. friend can point to any such instance; if he can, I shall be obliged if he will let me know.

Mr. BILLING: I shall do so.

Mr. Peto asked the Minister of Munitions whether all patent rights over the manufacture of aircraft engines or any other essentials of war have been without restriction placed at the service of the Government; and, if not, whether he will see that immediate steps are taken to place the Government in complete and unfettered control of all these rights for the prosecution of the war?

Sir W. Evans: The Government has full powers over all patent rights under Section 29 of the Patents and Designs Act, 1907, and full power under Regulation 8 (cc) of the Defence of the Realm Regulations to enforce the disclosure of secret processes and designs.

Mr. Peto: Is not the action of the Government, in fact, limited in placing orders for parts which are covered by any patent to the firm which holds those patents?

Sir W. Evans: No; that is not so. The Government have full power to place any orders for any parts, whether or not they are covered by patents, wherever they think they can get the best production.

Losses (Official Reports).

Mr. BILLING asked, in view of the fact that our official reports of air losses at the front refer only to machines that are missing, whether any official record is kept of the number of our machines lost by crashing or being shot down behind our own lines; and whether the figures are published?

Mr. Macpherson: Yes, Sir; official records are kept, but they are not published.

Mr. BILLING: Will my hon. friend say whether papers will still be allowed to suggest by headlines that there has been a considerable success owing to only a portion of our losses being published?

Mr. Macpherson: I am not responsible for what appears in the papers. They are, like human beings, liable to be wrong.

Mr. BILLING: Can my hon. friend edit the Commander-in-Chief's report, which suggests this to the papers?

Aeroplane Output.

Sir H. DALZIEL asked the Under-Secretary of State for War whether he is satisfied with the number of aeroplanes now being turned out by our aircraft factories; and whether he is prepared to consider the question of placing increased orders with firms who are in a position to execute them?

The Parliamentary Secretary to the Air Board (Major Baird): More aircraft could, no doubt, be used if they could be produced; the fullest use is being made of manufacturing facilities, and increased orders have been placed with those firms which are in a position to execute them.

Mr. Watt: Is it not the case that some aeroplane factories are being closed down for want of orders?

Major Baird: It is not possible for me to judge of questions on those lines because two things have to be balanced—aeroplanes and engines—and very often some shops have to go short because other parts are not coming forward in time.

Damaged Machines.

Mr. BILLING, on July 20th, asked the Under-Secretary of State for War whether it is the practice in the R.F.C., when a machine is wrecked or badly damaged, immediately to destroy by fire those parts which are combustible and to bury non-combustible parts; and, in view of the present shortage of metal, if he will see that this procedure is discontinued?

Mr. Macpherson: No, Sir; this is not the practice.

Mr. BILLING: Surely my hon. friend is aware that this has been done repeatedly and is being done, and under those circumstances will he issue an order to see that it is restrained?

Mr. Macpherson: I cannot add anything to the very definite answer I have given, in which I said it was not being done.

Defence of London.

Mr. BILLING asked the Under-Secretary of State for War whether, in view of our shortage of pilots for the defence of London, he will see his way clear to recall all pilots who have been dismissed from the R.F.C., or are in process of being dismissed, or who have been or are being called upon to resign their commissions from the same on account of their refusing to fly the R.E.8 machine or criticising other aeroplanes of official design and provide them with a suitable fighting machine, and arrange that they shall be formed into a special squadron for the defence of London?

Mr. Macpherson: The answer is in the negative.

Mr. BILLING: May I ask whether it is not the fact that there are hundreds of pilots, first-class, skilled pilots, who for social and service reasons have been dismissed or requested to send in their resignations to the Flying Corps, and will these men be put to some useful purpose in view of the shortage of pilots?

Mr. Macpherson: My hon. friend's supplementary question has no relation to the question on the Paper. I have already denied that any man has been dismissed from the Air Services on account of social reasons. The question my hon. friend asks me here is whether the authorities are prepared to take back to the Flying Corps men that he himself states refused to obey orders.

Mr. BILLING: Is the hon. member aware that many of the pilots who refused to fly in the air raid are skilled competent pilots, and only refused to fly because they did not believe the machines were safe? Will they be given an opportunity to try something else?

Aerodromes (Employment of German Prisoners).

Mr. BILLING asked whether a number of German prisoners are being employed at an aerodrome as mechanics or in any other capacity?

Mr. Macpherson: German prisoners are being employed on the construction of aerodromes, &c., and not otherwise. Their employment has been found necessary in cases where free labour is scarce or difficult to procure, in order that the completion of these urgent works may not be delayed.

Mr. BILLING: Is the hon. gentleman aware that in aerodromes throughout the country—I put several names in the question which do not appear—these German prisoners are employed, and in aerodromes which are actually engaged in the defence of this country, and will the machines have to be used—

The Speaker: The hon. member is now making a statement.

Mr. BILLING: May I ask whether the hon. gentleman is prepared to issue an immediate order to remove all German prisoners, and all Germans, from the precincts of aerodromes in which Home Service Defence machines are stationed?

Mr. Macpherson: I will have that matter very carefully considered, and will place my hon. friend's representations before the military authorities. But I should like to say that my information is quite definite that no German prisoners are employed in existing aerodromes. They are employed on construction work.

Mr. Sherwell: Will the hon. gentleman make special enquiry as to whether, as a matter of fact, German prisoners were not employed in the grounds of a special aerodrome near London last Saturday?

Mr. Macpherson: I shall certainly do so.

Public Warnings of Air Raids.

Mr. BILLING (by Private Notice), on July 23rd, asked the Prime Minister whether his attention has been called to the distress and confusion occasioned in London yesterday morning by the erratic explosion of 233 bombs as a warning of air-raid danger, and whether, in these circumstances, he will have this method discontinued and an intelligent system of air-raid warnings introduced without delay?

Sir G. Cave: My right hon. friend has asked me to reply to this question. I have no doubt that the warning given yesterday caused inconvenience, but my information is that the inconvenience was cheerfully borne and that there was nothing which could be called confusion. I think that in future the warning should certainly be delayed until the enemy aircraft come nearer to London than they came yesterday, and that the number of signals to be given might well be reduced; but, subject to these two points, which will be considered at once, I believe that the system of warning by sound-bombs has proved effective, and should be continued.

Mr. BILLING: Is the right hon. Gentleman aware that the noise made by these sound bombs is absolutely identical with that of an ordinary air raid, and that many old ladies and nervous people who suffered from shock—[Laughter.] Loud laughter! There are thousands of people in London who suffered great nervous shock through this method. There are much simpler and more effective methods, and will not the right hon. Gentleman consider them?

Mr. Speaker: That is a statement.

Making Good Losses through Air Raids.

Mr. LOUGH asked whether his announcement to the deputation of mayors with regard to the Government accepting the principle of making good any losses sustained by enemy air raids or bombardments takes the place of the schemes of insurance which have been in operation; and, if so, whether premiums on policies which have been taken out in advance will be repaid as from this date?

Mr. Bonar Law: I can for the moment add nothing to the reply I gave on the 18th instant to the hon. Member for East Finsbury.

Houses Near Aerodromes.

SIR H. DALZIEL asked the Home Secretary whether he has any information concerning the nationality of the present tenant of Englemere Cottage, Ascot; whether the cottage is almost opposite the aerodrome at Ascot; and can he say who is the owner of the cottage and for how long he has let it?

SIR G. CAVE: The house to which the hon. Member, I think, refers is Englemere Wood Lodge, Ascot. I am informed that it is near the aerodrome and that the present tenant of it is a person of German origin who was naturalised as a British subject in Australia in 1900. Inquiries were made by the police regarding him soon after the beginning of the war, and it was ascertained that his loyalty was well vouched for. The owner of the house is Mr. Victor Wellesley, and the house is let for another two years.

MR. HOGGE: Does the right hon. Gentleman consider it quite right, in view of the public opinion on the subject, that a naturalised German should be so near to an aerodrome?

SIR G. CAVE: I really can do nothing unless I intern him. He has given no reason for that; he is a British subject.

MR. HOGGE: Would it not be much better to remove him from the locality of an aerodrome?

Aeroplane Construction.

MR. OUTHWAITE asked the Parliamentary Representative of the Air Board whether the Air Board exercises any control over the construction of aircraft; and whether any members of the Board are contractors for aircraft or component parts?

THE PARLIAMENTARY SECRETARY to the Air Board (Major Baird): The Board exercises control over the construction of aircraft in that it is responsible for design. Contracts, however, for supply are placed by the Ministry of Munitions. Sir William Weir, a member of the Air Board, is managing director of G. and J. Weir, Limited, who are contractors for aeronautical supplies. He is not personally a contractor. Mr. Martin, another member, is managing director of Daimler Company and Birmingham Small Arms Company, both of which are contractors for aeronautical supplies. He is not personally a contractor.

MR. OUTHWAITE: Is it not a very dangerous precedent to establish that Government contractors or designers should be in a position to determine who of their rivals should be allowed to design or construct?

MAJOR BAIRD: These two gentlemen have given their services at great sacrifice to themselves personally and to their interests, and they have rendered incalculable services to the Air Board. It would be a great misfortune to lose them.

MR. G. LAMBERT: Is not Mr. Martin, managing director of the Daimler Company, one of the best engineers in the country?

MAJOR BAIRD: Nobody who knows anything about it has the slightest doubt that we could not possibly get two better men.

MR. OUTHWAITE: Is it not likely to cause designers to believe that they do not get fair treatment when it is known that their designs compete with those of members of the Air Board itself?

MR. BILLING: Are these two gentlemen still drawing their directors' fees or have they resigned their directorships?

MAJOR BAIRD: I do not know whether they are drawing fees as directors, but I know that they are not drawing any salaries from the Government.

Royal Visit to Southend.

MR. MACPHERSON: I hope that the House will allow me to make a personal explanation.

I was asked the other day whether any aeroplanes escorted Her Royal Highness Princess Mary to Southend, the implication being that these machines were withdrawn from the defences of London. I then replied that no aeroplanes of the Royal Flying Corps escorted Her Highness.

This answer, I regret to say, was incorrect, but it was given after the usual reference to the training brigade of the Royal Flying Corps and the Home Defence Group. Neither of these authorities was, I understand, able to find at the moment any foundation for the assertion. From further investigation it appears that on the occasion of this visit the honorary Secretary of the Royal Naval Hospital had approached the commander of the depot squadron in the neighbourhood and asked him if a guard of honour could be supplied. The

squadron commander replied that if he had any machines flying on that day in the ordinary course of training he would raise no objection to their flying along the railway.

The honorary secretary of the Royal Naval Hospital wrote to Sir Edward Wallington to this effect, and Sir Edward, in reply, wrote:

"I beg to thank you for your letter of the 7th instant, informing me that Major Moore has kindly offered to escort the Royal train on Wednesday next into Southend. I hope that nothing will be done in any way to interfere with the services of the Royal Flying Corps, as they may have more important places to defend. I have spoken to the Princess Mary, and Her Royal Highness quite concurs in this."

On the day in question, however, five training machines were practising formation flying, which is part of the ordinary course of training, and this flight flew eight miles up the railway and back to Southend. These were ordinary training machines, and each was manned by an instructor and a pupil. They were not armed, and would not, under any circumstances, have been used for fighting.

This action was taken by the squadron commander without reference to any superior authority, and he has stated that since the flight was an ordinary and proper part of the training for which he was responsible, he did not consider any reference necessary; consequently, Headquarters here, upon whom I relied for my information, were not apprised of the fact.

I have taken the first opportunity of stating all the circumstances and all the facts to the House, and I would personally express my regret that I had been the means of conveying to it information on this subject which was incorrect.

MR. BILLING: May I ask—

MR. SPEAKER: No question can arise on a personal statement.

Court-Martial (Hounslow).

MR. JOYNSON-HICKS asked the Under-Secretary of State for War whether the court-martial held at Hounslow on the 19th June on three officers of the Royal Flying Corps has yet promulgated its decision; and, if not, what is the reason for the delay, and have the officers returned to duty?

MR. MACPHERSON: I understand that these proceedings have now been promulgated, but I cannot make any definite statement until the proceedings have been returned to the War Office after promulgation. One of the trials resulted in an acquittal; the other officers would return to duty in the usual course after the promulgation of the sentences.

Telescopes.

SIR HENRY DALZIEL asked the Under-Secretary of State for War whether the gunners in charge of the anti-aircraft guns in and around London on the occasion of the last air raid were provided with adequate sighting arrangements to enable them to distinguish the British from the German aeroplanes; whether an enquiry has yet been made into the circumstances surrounding the loss of the British aeroplanes; and whether he is satisfied that they were not shot down by our own guns?

MR. MACPHERSON: Telescopes are provided for the purpose of identifying aircraft. None of our machines were shot down by our guns on 7th July.

Spare Parts.

MAJOR KERR-SMILEY asked the Under-Secretary of State for War whether the lack of aeroplanes spares affected the number of machines of the latest service type which could have been put in action during the air raid of the 7th July; will the Government take steps to ensure that the contracts for spares are not encroached on to make new machines, and similarly, when an increase in certain types of machines is ordered, that a contract for a liberal percentage of spares is placed at the same time in order to avoid a similar shortage; will he say what action, if any, is taken to ensure that spares contracts are delivered in the specified time; and whether any action is taken against defaulting contractors?

MAJOR BAIRD: The answer to the first part of the question is in the affirmative. As regards the remainder of the question, the practice is to order together with the machines a liberal percentage of spare parts, and all practicable steps are being taken to secure that machines and spare gear are delivered concurrently.



R.F.C. Staff Officers' Uniform.

AN Army Order, dated July 23rd, states that the following distinctions in dress have been approved for Staff Officers of the Royal Flying Corps:—

Gorget patches.—French grey cloth with line of crimson gimp and small Royal Flying Corps button.

Cap-band.—Band of French grey cloth to be worn with the forage cap of the Royal Flying Corps (paragraph 579B, Dress Regulations). A cover of drab material to be fitted to the forage cap so as to show the badge, band and peak. Samples can be seen in the pattern room at the War Office.

"Erecting and Aligning 80 h.p. Avro Biplanes."

UNDER the above title Messrs. A. V. Roe and Co., Ltd., have issued a second edition of their most useful and instructive booklet, the first edition of which met with such a favourable reception both from the Air Services and from civilians. The value of the first booklet is so well recognised that no particular reference to it is required. The second edition has been largely rewritten as regards its subject matter, while many new features have been incorporated, thus rendering the latest edition even more useful and up-to-date than its predecessor. The tables of combination strength of cables and turnbuckles have been revised where necessary, and new tables have been added. One of the new features of the latest Avro booklet is a glossary of technical aeronautical terms, based on the Official List of Aeronautical Terms issued by the Aeronautical Society of Great Britain. As in the case of the first edition of the Avro booklet, although the dimensions given apply only to Avro machines, the methods described are suitable for erecting and aligning any tractor biplane of similar type, a fact which very materially increases the utility of this valuable little work. Anyone interested in the erection and aligning of tractor biplanes should apply for a copy, which can be obtained at the reasonable price of 1s. 6d. post free.

Another Opportunity for Women Workers.

LENSES play a great part in aircraft work at the front, and the demand for workers for the delicate processes of lens-making is very urgent. To fit women for work in the glass industry a school of optical munitions training has been opened at the Northampton Technical Institute, where, under the direction of the Ministry of Munitions, students receive a free course in optical glass production. The period of training ranges from six to twenty weeks, during which a maintenance grant is paid. There is at present a demand for a certain number of trained workers in London, and those between the ages of 16 and 30, but preferably 16 to 19, prepared to accept a position in a factory at the completion of their course, are eligible as candidates. No special physical strength is required beyond the endurance necessary for certain processes undertaken in a standing posture. Application by letter should be made to the Director, Optical Munitions Training School, Northampton Polytechnic Institute, 280, St. John Street, London, E.C.1.

R.N.A.S. at Cricket.

A FEATURE of the garden fête to be held at Wembley Park on Saturday next, July 28th, in connection with the Navy week celebrations to raise money for King George's Sailors' Fund, will be a cricket match between the R.N.A.S. (Armament Section, Wormwood Scrubs) and the Arlington Athletic Association; and there will also be an *al fresco* concert given by prominent West End artists.

A German Airship Relic for South Hackney Church.

HAVING secured from the War Office a section of the German airship brought down at Cuffley last September, the Rector of South Hackney, the Rev. B. S. Batty, has placed it in the west end of the church with the following inscription:

"Portion of the Zeppelin brought down at Cuffley, September, 1916, after voyaging over South Hackney. Presented to South Hackney Parish Church. For the skill and courage of our airmen, we praise Thy Name, O Lord."

SIDE-WINDS.

ALTHOUGH a call upon Messrs. C. N. Haden and Sons, heating engineers, found Mr. Horton at his office in Lincoln House, Kingsway, too busy to entertain inquisitive callers, a few brief moments extracted the fact that the firm are getting remarkably busy fitting factories in the home counties and farther afield. With the autumn now so close, and winter following on its heels, arrangements for the installation of heating apparatus should be made at once, otherwise with the present shortage of skilled labour, many workers are likely to be left to shiver through the long months when Old Sol scarcely shows his face above the horizon.

THE Selsdon Aero and Engineering Co.'s works extension at Croydon are now in full swing. Engine parts of all descriptions are in daily delivery, and the factory is a hive of humming industry. Not only engine parts, but machines for all purposes in engineering are within the company's catalogue of manufactures. It was significant when visiting a certain large works in the London district recently we noticed that out of 15 lathes in one room no less than 12 of them bore the name of Selsdon.

S. SMITH AND SONS (MOTOR ACCESSORIES), LTD., the Great Portland Street firm of speedometer, carburettor, and other accessory fame, notify us that they have opened a Service Depot for the convenience of Midland traders, situate at 122, Alma Street, Birmingham. This depot carries a full range of the firm's well-known accessories, and should prove an enormous convenience for Midland distributors.

MR. DOUGLAS THORBURN left for Paris on Monday on business in connection with the aviation department of Messrs. C. C. Wakefield and Co.

It is notified that the Navarro Aircraft Co., Ltd., has changed its name, and in future will be known as the Burton Aircraft and Manufacturing Co., Ltd.

MESSRS. C. LINDLEY AND CO., LTD., notify that they have arranged that the works at Belfast Road, formerly owned by the British Aircraft Manufacturing Co., and recently acquired by them and run under the latter title, shall be known in future as "Lindley's Aircraft Component Works," Belfast Road, Stoke Newington, N. 16, to which address all orders, invoices and general correspondence should be sent. All payments, accounts, statements and financial correspondence should still go to the head office, 34, Englefield Road, London, N. 1.

ENGINEERS who have to do with profiling and cam milling will be greatly interested in a treatise on the subject which has just been published by Messrs. Webster and Bennett, the well-known machine tool makers, of Northey Road Works, Foleshill, Coventry. Primarily the book is intended to assist users of the W. and B. automatic profile milling machines to obtain the maximum output from them, but it is also a useful guide to prospective buyers in the selection of suitable plant. With the aid of photographs and line drawings the whole process of profile milling is simply described, and illustrations are given of various fittings and parts turned out by the process. Any one interested in machine tool work of this type should take care to make early application for a copy of the treatise, as its practical value will certainly cause a rush for it.

MR. JOHN CHILTON, the head of the firm of John Chilton and Co., of 71, Broad Street, Birmingham, and Oldhill, has just been appointed a J.P. for the county of Stafford. The

firm are the sole agents for Arrol-Johnston cars in the counties of Worcester, Warwick and South Stafford. Mr. Chilton has represented his ward on the council since 1903 and was chairman in 1908. Last year he was chairman of the Motor Trades, Agent Section, and is now a vice-chairman and a member of the executive council.

It is announced that the Cambridge School of Flying is now open to receive pupils with a view to preparing them for either the R.N.A.S. or the R.F.C. The aerodrome, situated a little to the south of Hardwicke, just outside Cambridge, comprises some eighty acres, with low, well-trimmed hedges, which has been cleared of trees and all obstructions. The school has in use five Caudron-type tractor machines, the tuition being in the hands of Mr. Assheton Salton, formerly of the Northern Aircraft Co., of Windermere, assisted by Mr. B. J. Curry and Mr. T. H. Drew. The school is proud of the fact that during the six months it has been open no serious accident to a pupil has occurred. Further particulars can be obtained by prospective pupils from the offices of the company at 30B, St. Andrew's Street, Cambridge, where also arrangements can be made for passenger flights.

CHARMING and chaste to a fault, as one would expect it to be, is a little publication entitled "The New Dominion," or, as its subtitle has it, "The Book of Whitehead Aircraft." Beautifully printed in an artistic type and illustrated by a large number of photographs, the book is a souvenir not only of Whitehead aircraft, but of aviation generally, which many will think well worth the 1s. 6d. which is given as its price. In "Aviation Facts" are set out briefly the salient achievements of aviation, starting with the Wright glider of 1900. There is also a chapter giving a glance, as it were, at the building of aeroplanes in the Whitehead Works at Richmond, many of the stages in the manufacture being clearly depicted in photographs. In the concluding chapter the possibilities of aviation as a profession are dealt with, and special mention is made, of course, of the facilities for training aviators in the school of aviation established by Whitehead Aircraft. Not only does the school teach the flying of machines, but the pupil is also enabled to obtain an insight into the designing and building of modern machines as carried out in up-to-date works.

FROM Detroit it is reported that Mr. Henry M. Leland, President and founder of the Cadillac Motor Car Company, and one of the most successful men in the American motor industry, has, together with his son, Mr. W. C. Leland, resigned, in order to build aeroplanes on a large scale for the U.S. Government. Mr. Leland is credited with the statement that there is not an aeroplane made in America that is fit to fly over Germany during the war, but that he is going to help the U.S. to put a fleet of craft in the air that will be built along scientific lines, and will be safe to use over hostile country. Although Mr. Leland has not yet stated where his new factory will be situated, it is not unlikely that it will be in or near Detroit.

ANOTHER announcement from across the pond is that Mr. John N. Willys, of Overland car fame, is to become President of the Curtiss Aeroplane Company, and that a new factory, near the Overland plant, will shortly take over the manufacture of all Curtiss aeroplane engines, the demand for which has proved more than the works at Hammondsport, N.Y., can deal with. The Overland Company are said to be in the fortunate position of having a surplus of suitable machinery which is now being installed in the new factory.

The Bombing of Zierickzee.

It is authoritatively stated that as a result of further inquiry into the matter of the recent dropping of bombs on Zierickzee, and an examination of the fragments of bombs, His Majesty's Government have accepted the correctness of the view put forward by the Dutch Government that the bombs were dropped by a British airman under the *bona fide* impression that he was over German-occupied territory. His Majesty's Government have expressed to the Netherlands Government their profound regret at the deplorable mistake which resulted in the bombardment of Zierickzee, and have assured them that every possible precaution always has been and will continue to be taken to prevent such

occurrences. His Majesty's Government have expressed their willingness to pay compensation for the damage occasioned by the bombardment.

The *Handelsblad* expresses satisfaction over the British Government's acknowledgment regarding the dropping of bombs on Zierickzee. The journal suggests that the first denial that the bombs had been dropped by British airmen was due to the fact that the aviators concerned did not know or could not believe that they had been over Zierickzee. The *Handelsblad* considers that the final acknowledgment of the British Government is all the more honourable because it was rendered more difficult by the original denial.

A Week's Hard Fighting.

"FOR the past seven days the work of the R.F.C. upon the Western front has bulked largely in the official *communiqués*, and I gather that it is no exaggeration to say that the week in question has been marked by the hardest and most continuous aerial fighting since the war begun," writes Reuter's correspondent from Headquarters in France on July 20th. "Taking the total of the fights published between July 11th and 17th inclusive, the following are the results. Enemy machines brought down by our aeroplanes, 42; shot down by our guns, 3; driven down out of control, 43. The number of our machines missing in the same period is 31.

"This disproportion may be taken as fairly illustrating the average measure of our aerial supremacy over the Germans. In other words, we usually succeed in giving very much more than we get. The weather on the whole has not been good for aeroplane work, otherwise the figures would doubtless have been considerably bigger still. The most notable feature of the fighting has been the size of the enemy formations. More than once British airmen have reported encountering hostile groups numbering between 30 and 40 machines, this showing clearly that the Huns trust to make up by overwhelming superiority of numbers what they lack in individual qualities. When attacked, however, these large formations invariably lose their tactical cohesion, and the fight resolves itself into a series of disconnected contests.

"Many gallant exploits have been recorded during this period, but they are all so much like the countless brilliant deeds which have gone before that they are taken quite as a matter of course, and as all in the day's work, by their authors and their comrades. Here, for example, is the day's work of one flying unit: Total time up for all the machines, 308 hrs. 40 mins.; number of bombs dropped on back areas, 101 of 20 lbs. each, three of 112 lbs. and seven of 230 lbs. In addition, photographic work, reconnaissance work and artillery spotting were carried out, as part of the normal routine. Two officers who remained up for four hours ranging for the artillery were able to record many successes.

"An observer in a fighting reconnaissance machine had a thrilling experience a few days ago. The plane was attacked by five Albatros scouts. The British machine drove down one of its assailants, which crashed, and sent a second nose-spinning, out of control. Then the pilot lurched forward in his seat as a bullet from a machine gun found its billet, and the aeroplane began to take charge. Emptying the drum of his Lewis gun at his enemies, the observer leaned across the figure of his stricken comrade, and although he had very little knowledge of pilot's work succeeded in landing behind the British lines."

A Kite Balloon on Fire.

LONDON firemen were called upon to tackle a novel job at Roehampton Lane the other day. An observation kite-balloon had been struck by lightning and set on fire. It fell blazing to the ground and was completely destroyed, the volume of flame igniting the undergrowth and several trees.

The U.S.A. Aeroplane Bill Passed.

THE United States Senate, on July 22nd, adopted the House Bill appropriating £128,000,000 for aviation. The measure now goes to the President for signature, when it will become operative. Details as to how the money will be spent have not been officially announced, but the Bill, any way, makes provision for 22,000 aeroplanes and 100,000 men.

America and Italian Flyers.

CONTINUING its round of the Allied aviation centres, the United States Aviation Mission was at Milan on July 19th, and inspected not only the large camp, but also visited several of the large factories and witnessed a display by some of the most noted Italian pilots. The American Chamber of Commerce entertained the guests, among whom were Major Bolling, Signor Caproni and his brother, Dr. Caproni.

One Against Fourteen.

FLIGHT ADJUTANT EDMOND THIEFFRY, a Belgian airman, encountered on July 3rd a German air squadron composed of 14 Albatros machines. In two minutes he brought down two of the machines, and, flying at a great speed, forced a passage through the barrage of the remaining 12 machines.

Piracy by German Seaplanes.

It was reported from Rotterdam on July 23rd that the Dutch steamship "Gelderland" had been stopped that morning by three German seaplanes under the eyes of the Hook of Holland coastguard. A German officer went on board and forced the ship to proceed to Zeebrugge.

Air Work with Artillery.

"MORE and more, week by week," writes Mr. W. Beach Thomas to the *Daily Mail* on July 20th, "we see these counter-battery duels waged to the death; and if anyone has any doubts about our air service in France he should see the daily list of batteries marked down and ranged upon by our observers. The war is becoming more and more a counter-battery war, and this means that the air service takes a bigger and bigger part.

"The enemy is hiding his guns more and building heavier defences for them; he surrounds them with smoke screens and roofs them with concrete and walls them with scene-painting and divides them with sham batteries; but he has not yet dodged the eyes of our airmen with any general success. We have knocked out many guns, if not whole batteries, in the recent and still continuing duels, especially round Lens, a town important in itself and a valuable fortress on the road to Lille.

"The enemy has been forcibly driven by the development of the war to drive his airmen over our lines and multiply his balloons. Ten of his observing balloons were up at one time in the Lens area alone."

Art Smith in Japan.

ART SMITH, the well-known American pilot, has been flying again in Japan during the last few months. He has been fulfilling his exhibition contracts which he was unable to keep last year on account of the accident, resulting in a broken leg, he met with at Sapporo. On one occasion he flew a Morane-Saulnier monoplane—the first flight this pilot has ever made on a monoplane.

* PUBLICATIONS RECEIVED.

Erecting and Aligning 80 h.p. Avro Biplanes, Type 504. Manchester: A. V. Roe and Co., Ltd. Price 1s. 6d.

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ROTARY IGNITION, LTD., 30-32, Ludgate Hill, E.C. 4.—Capital £10,000, in £1 shares. Ignition specialists, &c. First directors: F. Price Handkrik and H. G. Atkinson.

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